The Builder.

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Concerning Architecture, and London House-Building.

CONSIDERING that in the last ten or twelve years, marked improvement has taken place in our profession, and a higher standard of qualifications has been acknowledged by its members, it is to be regretted that the growth of London continues to afford opportunities for the manifestation of art and taste, which in number are out of fair proportion to the quantity of the building-work always going on. Some kind of assistance in preparation of drawings is obtained, perhaps in a majority of cases, by the speculative builder; or the supervision of a contractor by an architect exists, or is provided for, though to a certain limited and rather ideal extent. In truth, the sort of talent enlisted in these cases, must be of a very different order to that, for example, with which we ourselves in the course of our literary duties are chiefly brought into contact; or otherwise the *supervision* is comprised in the nominal connection of a "surveyor," with the work or some branch of duty relative to it. We apprehend that this sort of assistance, in many cases, stands in the way of complete utilization of those qualifications referred to at the outset, which otherwise might bear fruits correspondent to the real sedulity of their cultivation by architects,—and in improved planning and construction of houses, no less than in art-manifestation—matters all tending to the great ends of social and sanitary amelioration, to mental and moral improvement, and towards the ultimate domestic comfort of the people and individual happiness. Other callings may have their *mission* in regard to these ends; but the relation of our own profession to them, is both intimate and comprehensive,—though the value of such connection may, in the main, have yet to be derived, and perhaps even the capability of that valuable return have to be at all hands adequately felt.

It seems necessary, then, ever and anon, to call the attention, as well of the profession as of the public, to this large amount of building-work, in London and at its outskirts, which is going forward; and with which—whilst the number of architects largely increases—the profession has no connection, or withal no opportunity of conferring or deriving benefit of any kind. Even though, as in the case of buildings of moderate cost, pecuniary inducements be not great, it should be a question how by these or otherwise, the best talent of the day can be brought into use,—a public question which architects should help to solve. What is wanting to secure those things of the nature of services in art and science, which assuredly the public voice will demand? The present generation of architects cannot but feel interested in themselves supplying those wants. Or are the architects prepared to admit that the objects can be attained on the supposition of superior qualifications to be acquired and exercised by builders, in that event to be regarded as designers, or in short artist-architects? Failing this, will architects be satisfied to see the extension of a class of builders' assistants doing in some fashion their work, without the educational qualifications? Have they themselves in readiness, a tangible scheme for meeting the demand? Is it the point of remuneration on works of small cost, that makes all the difficulty? Is it that the public require to be better informed as to the value of services by a properly qualified person; and are these services really rendered in cases where they are called for? In a word, are the qualifications of education and experience in any respect wanting with architects, to the end that conviction of the value of the services be afforded? If it be found that the five per cent. on the single work would not compensate for invention and design, can anything of the nature of copyright, that is to say, anything binding practically, or morally, if there be difficulties legally,—secure to the author of a design, from many works, what he could not derive from one? At present, we know, any architect's designs for one house are purloined unhesitatingly—as for the house next adjoining it; only, and worse for the public interest, they are so carried into effect as not merely to disgust the original artist, but to produce a positive injury to taste by the misconception induced of the force of alterations which, whilst assumed to be unimportant, constitute, as we observed lately in an article on the Wellington monument, really the difference between what is good and what is bad. There are no more prominent instances of bad taste now, than those buildings in which the window dressings, mouldings, and ornaments have been, as it was supposed, copied from the best examples, or from the drawings for other and recent buildings by able architects. We could at once name a dozen even of the most respectable builders of London, who are in the constant habit of using the moulds that were made for particular ornaments, and entire designs that were entrusted to them, in a manner which is as much opposed to the progress of art, as it is to principles of honour and morality. Or, lastly, can the public objects be obtained with due regard to others, by more frequent embarkation of architects in speculations connected with building?

It must be understood that we have formed no conclusive opinion any way, except as to the desirableness, or rather the necessity, which there is for architects amongst themselves to "ventilate" the question of the approaching public demands. Can they, the architects, devise means by which *they* may supply the want, and by which the public may receive the real thing, rather than the counterfeit which may fasten upon the country a reign of taste certainly below comparison with its capabilities, definable by those of its artists, and a long endurance of social and sanitary ills which now for a brief space are preventible. Let those who are architects of the first class, bring their attention to the fact that there are at present engaged on duties for which they are or ought to be qualified—and sometimes to their very exclusion—men not eligible at the Institute, calling themselves "surveyors," "engineers," "builders," "land-agents and house-agents," or "decorators;" and that the public go to these men on the matured belief that they get better served,—as to the matter of building, or sometimes even as to that of taste,—that the said public like to have before-hand what they think the best guarantee regarding what the work will cost; and that under this idea or some other, they will pay as part of a general charge for work, and bad work, an excess itself over and above what would be the amount of an architect's charge. We would have these points constantly before the attention of the experienced members of the profession, since they so much affect their interests, and concern especially those of the young practitioner; and be it recollected the while, that no good will result unless the qualifications we have so much spoken of, are maintained,—or rather indeed, unless they are raised higher than at present,—so that the architect, to whatever branch of the general profession he may desire to be accredited, may fully justify his claim to serve the public in his capacity. Without the educational standard *nothing* can be done.

We are withholding any expression of positive opinion; but it may be required to consider whether the old relations of builders and architects do not need reviewal. The question will no doubt suggest itself to non-professional readers, whether, without derogation of the distinctive professional character, and to their own gain as that of others, architects of ability and position might more frequently assist builders with plans and designs, as they are in the habit of assisting them with opinions and with evidence where there are cases of dispute and arbitration. We can even suppose that persons having in view the *pecuniary interests* of our profession, might be inclined to recommend in all cases, the employment of the architect by the builder, and would view this as simply analagous to the system which obtains in another profession, where even it is contrary to *etiquette* and custom, for the barrister to act except on the instructions of the more practical and executive branch of the general legal calling or vocation. We are afraid, however, that the parallel could not be exactly drawn, or with the same issue in the contrasted cases. The existing doctrine in trade, as we have had heretofore to observe, is *caveat emptor*,—sell any quality of article and get the best price you can. This is avowed; but the professional principle is wholly different, and is one that we believe is maintained in practice both in our own ranks and by many honourable members of other professions. Of course there are builders—some whose names will occur to every one—in whom confidence, it will be said, might be placed as to quality of work and moderation in charges, whenever they were consulted as advisers. The recognised principle of commerce, however, tends the other way: and the larger number of builders of the class we have been chiefly considering are speculators, "pure and simple." We do not mean to say that all members of *professions* are free from liability to accusation; and, in trades and professions both, it is to be admitted that the true change required is one of morals, and has in point of fact no applicability altering with the classification of men's callings. The unlimited confidence often reposed by clients in solicitors, the latter are in a very large number of cases justly deserving of. The family apothecary, though it is possible to regard him as a sort of trader in drugs, also, is deservedly, often in like manner, the disinterested adviser and friend. But if imputations are possible in such cases, doubts with reason may be entertained of the disinterestedness of a class, characterised, it may be said, hardly by any such principles as those referred to in the moral or the professional points of view. We need say nothing of the consideration that may be due to a builder previously employed, and confided in, by a building-owner, or a proprietor of an estate. But often the public commit the grave error of trusting, without recommendation or check, men who have no object whatever but that of self-interest, based on the narrowest view and the calculation of the immediate moment. It is in the very cases where the professional element and the professional character and qualifications are most wanted, that they are dispensed with. The interest of the public really is to consult, in the first instance most frequently, the architect, rather than the

builder as now, or on the supposition that the architect's qualifications may be in an indirect way obtained, and that the object of progress in art and structural science can be answered by the speculating builder.

True it is, the public generally, or as represented by the Government, or by committees and other authorities, have established no claim to disinterested services: their course towards architects has not tended in the way of proper encouragement to merit and to maintenance of the desired standard of qualifications. But errors of the mode in which buildings, *public* or *private*, are commissioned, it must be the business of architects to get corrected. We ourselves did what we could in that direction in reference to recent competitions where fitting use has not been made of the qualifications as they exist. The purpose of our present article relates mainly to the design and building of houses, and to those of very ordinary dimensions and cost. It is in these, no less than in the larger edifices, that art and structural skill are required. Till the exertions are enlisted of persons who may be properly qualified, on these "common objects," which should become all objects of art,—it will be vain for our country to credit itself on having made any great step in art-productiveness, or towards beneficial results attendant on that position. It matters little—at least, to our actual argument—by whom the art and skill are supplied: we merely show that, although improvement has taken place, the art-works bear no numerical relation to the extent of new building and the qualifications of architects.

There is a public demand for architectural art; otherwise decorative character would not be attempted as it is in some shape now universally. But, we are even inclined to prefer the common houses of the early part of the last century, brick-faced and unornamented as they were, to the miserable imitations which the reign of cement has brought in; which have produced disgust of original models, and have led to mistakes and controversies that are known to all our readers; and which delay the educational progress of the people in what relates to art, and that of the profession itself. In the old houses there might be no window-dressings, though there was in many cases a porch and doorway which would well compare with the corresponding feature of the ordinary house of present date. The staircase also, sometimes remarkable decoratively, was generally well-planned. No unprejudiced architect, we think, could look at the houses we are speaking of—and there are many remaining in London and in provincial towns,—without feeling that the ordinary builders of that day were a higher class of men than the speculative builders of our own time. If the former had few books—though, indeed, there were several that have passed out of date, but may yet be looked at with advantage,—they knew how to get from them many good features, and to use their models with, on the whole, less of objectionable result than their successors produce with their imitation of the best models.

By the manner in which the natural demand, as expressed by the public, is now sought to be supplied, a vitiatory action on taste prevails at the same time that there is hopeful development otherwise. Quantity of the bad tends to swamp growth of the good; and it says much for the real art, that its power manifests itself wherever it is allowed a standing; and the effects of one well-designed building may be seen on others which rise adjacent. Thus, if we are dissatisfied with an existing state of things, observations at intervals of a few years indicate to us improvement,—though it may be not all that we could desire, and much less than with existing agencies could be effected.

The business, whether of a mere speculator in house property, or of a building contractor, will soon demand something more than enterprize or capital, the ordinary concomitants to success in the vulgar perception of commerce and trade. A builder should be a man of superior general education, if not also qualified better than the public to see the difference between what is good and bad in taste; and if speculator, he should be ready to help, rather than stand in the way of, progress of architecture. The speculators who are those who extend the area of London, however, are not of this class: and the public need again and again to be reminded that what is really the architectural talent of the day, has nothing to do with what becomes the character of London architecture. Whatever be the commodiousness of certain houses, the *art* about them, in vicinal Cubitopolis, or Tyburnia; in suburban Islington, or Hackney; in transpontine Camberwell, or distant Greenwich, bears kindred likeness, whereto the cement-man has given much, and the artist and architect nothing save what has become distorted in transmission, or by the manner of its use. Houses are built even without drawings, and the staircases become the very opposite of those of the last century for convenience and safety. The utmost that the builder gets in the way of architectural skill is comprised in the assistance of one of his own order, who is able to draw a rough plan and an elevation that will allow any kind of ornament he has on hand to be used, and without regard to proportions or congruity. The ground landlords of course have occasioned much of the bad building and prevalent ugliness. But do qualified architects intend always to have little influence over public taste, and to hold for ever aloof from what must be building, and might, with some little help of theirs, just as well be architecture?

AMERICAN RAILWAYS,—THEIR COST, CONDITION, AND PROFIT, COMPARED WITH THOSE OF ENGLAND.

IN profitable working, our railways are not as yet, by any means, all that can be desired; but by the accounts from America they are perfection itself, by comparison with the boasted Yankee "tracts," not only in workmanlike construction and substantiality, but in economy of working, and even in resultant profit. It is well the proofs are American: had the exposure been of British origin, we can all readily conceive the hullabaloo which that man of "calculation" and of "common sense" and practical action,—the go-ahead Jonathan, would have kicked up, and the dirt that would have been cast upon our English railways from the "mud tracts" of America. As it is, the native dissatisfaction which has secretly been fermenting in Jonathan's heart, while he compared his own cheap and nasty railway system with those on this side the water, at last manifested itself in a resolution of some of the principal railway managements of the United States, to pick out two of their own most able and thorough-bred engineers from amongst the extraordinary mass of incompetency which appears to prevail amongst that craft—we are not justified, by all accounts, in calling it a profession,—in America; and to send these able and chosen men to this country, in order to investigate the causes of those differences which have been secretly giving so much dissatisfaction in the United States. These two gentlemen, Mr. Zerah Colburn, and Mr. A. L. Holley, came, saw, and realized all the differences, took notes, and on their return to New York, prepared and issued a weighty volume, with numerous engravings, conscientiously and determinedly exposing, to all interested in their own country, the defects and short-comings of the American railway system by comparison with ours.*

From this important and salutary *exposé*, we shall endeavour to give our readers some idea of the comparative state of affairs in the American railway world, and of those reasons which ought to make us less dissatisfied, and more hopeful, in regard to our own.

"In comparing our railways with those of Europe," remark the authors, "we find that while the first cost of the road-bed and superstructure (or the permanent way) of those of the latter is but little greater, their expenses per mile run. for maintenance of way, is but *two-fifths* that in this country, while their consumption of fuel, for equal mileage, is less than 60 per cent. of the quantity burned in our locomotives.

The railways of this country (America) are operated at an annual expense of 120,000,000 dollars. The cost of operating the English railways for the same mileage is but 80,000,000 dollars—the difference alone being nearly equal to the annual production of the gold mines of California!

The expense of maintenance of way of American lines is from 31,000,000 to 35,000,000 dollars annually. That of English lines for the same mileage, 12,500,000 dollars—difference say 20,000,000 dollars annually. The cost of fuel for the former is 18,000,000 dollars yearly, that of the latter, *for the same mileage*, is but 7,500,000 dollars, or 10,500,000 dollars against our system. * * *

It is very common to attribute *all* examples of economy to 'management,' implying thereby organization, discipline, retrenchment, devotion, integrity, and business talent. These are of the greatest importance, but in none of these respects are English railways managed greatly different from those of this country, excepting that the former have, in nearly all cases, a responsible engineering head, permanently retained in the service. But in character and quality of structure, English lines are materially different from those of America.

Works which eat themselves up so fast as do ours, must be founded on a low standard of engineering. It has been well said that practical science, as enlisted in the service of moneyed enterprise, must necessarily confess itself at fault if, by any glaring defect in its exercise, that enterprise fails to reap its fair reward. Robert Stephenson, on taking the chair as president of the Institution of Civil Engineers, congratulated the 700 members that, within a quarter of a century, their business had risen from a craft to a profession. As a science, engineering is, indeed, ably cultivated and creditably applied in Europe. How is it here? There is certainly no lack of natural ability—no want of genius. But in most of our works of construction, *everything, the future especially, is sacrificed to the present*. Quantity, not quality, is the staple demand. Thus the higher developments of engineering are systematically undervalued, and we boast the extent of our executed works and the enterprise with which they have been carried forward; while their *quality*, as disclosed in their frequent disastrous failures, to say nothing of their extravagant maintenance, is too often a reproach upon our civilization. * * * * *

Wherever engineers have degraded themselves and their profession by sacrificing their better judgment to the cupidity of ignorant proprietors, they have fallen, hopelessly, to the rank of mere tools for contractors and railway directors. And thus the latter have often obtained absolute sway in matters upon which only an educated engineer can properly decide. It is due too much to the causes thus suggested, that American engineers have so little influence as a body, having no recognised interest in common, and having no power to decide what qualifications shall entitle any aspirant to admission on equal terms. The profession being brought into contempt, an engineer who is scrupulous of the character of his work and who stipulates for means sufficient for its faithful execution, is hardly in favour. Speculators, who assume to decide the matter, boast that they can command 'men' not only at a less salary, but who will also bring in far lower estimates. And thus the reputation of being a thorough engineer is not a profitable one, and very few of the profession in this country have built each more than one railway—each new line having its own 'chief,' born to the occasion, and who, thus raw and compliant, devotes himself to the routine of the field and of the office, while the president of the concern dictates the proportions of earthworks, the shape and quality of rails, and the selection of machinery and material generally. The condition of our roads is a sufficient commentary on this notorious abuse. Nor can they improve until our engineering takes a higher standard."

Such being the working-heads in American railway construction, let us see how that construction itself has been carried out. This the authors go into *seriatim*, and at great length; but we shall endeavour to state some of the more salient points in a condensed form.

While the earthwork of English lines is 33 feet in width at formation level, that of American lines is from 25 feet to 28 feet only for double track. The slopes of cuttings and embankments for the latter are very deep, say one to one, while they are seldom or never protected by grassing or turfing. Upon one long line, which had been in use throughout for over five years, no less than 7,000*l.* appeared in last year's charges for "watching cuttings," while the cost only of removing slips and repairing the effects of water, averaged 48*l.* per mile. The scantiness of the earthwork and the want of ballast, entail the necessity for constant packing and surfacing; and, indeed, earthwork is one of the most defective points in American Railway construction, and drainage another.

The provision for drainage is generally very incomplete, and with the narrow and badly made earthwork the road-bed is often saturated, and the ditches are choked. The firmness of support is thus lost: the ballast (if there happens to be any) sinks irregularly, displacing the track, increasing the resistance; thus adding greatly to the wear and tear of both track and machinery. The presence of water in the road-bed converts it into mud in wet seasons, especially when the frost is coming out in the spring, while in dry seasons the trains are enveloped in clouds of dust; but in the deep frosts of winter, especially when the road freezes immediately after a rain, the road-beds of many American lines become as rigid as rock. No condition can be worse, especially upon the "mud-roads," as those without ballast are facetiously termed, and which, unfortunately, form a majority of the American lines.

The sleepers of American lines are small, of irregular sizes, and laid often so closely as to prevent proper packing. They are never protected by chemical preservatives, and last only half as long as ours. The rails are light, notoriously of very bad material, and of a shape of "head" which experience in this country has proved to be

* The Permanent Way and Coal-Burning Locomotive Boilers of European Railways; with a Comparison of the Working Economy of European and American Lines, and the Principles upon which Improvement must proceed. By Zerah Colburn, and Alexander L. Holley: with fifty-one engraved plates, by J. Bien. New York: Holley and Colburn. 1858.

very objectionable. These, too, last only half as long as ours. There is no adequate system of supports at the joints, while the fastenings also are generally such that the rail does not lie quietly, its disturbance on the passage of trains largely increasing the resistance. In illustration of the general carelessness of American permanent-way engineering, our authors mention that upon the Erie Railway, for a given length of time, one-half of the joints at the rail ends averaged 1¼ inch open, several were 2½ inches open, and cases were actually found where the rails were separated 3 inches and even 3½ inches at the ends. The effect of this alone, not only on the smoothness of travelling, but on the endurance both of way and of rolling stock, may be readily conceived. Another similar example is furnished by the great number of railway gauges, which are no less than six in the United States—to wit, 4 feet 8½ inches, 4 feet 10 inches, 5 feet, 5 feet 4 inches, 5 feet 6 inches, and 6 feet; while in one part of the west a "compromise"—so characteristic of America—has been made, and the equipments of the 4 feet 8½ inches and 4 feet 10 inches gauges run together upon one of 4 feet 9¼ inches.

Many of the railways being opened in a very unfinished state,—often, indeed, only half finished—their construction-accounts must not only necessarily remain open, but may be, and indeed, often are, made to bear what rightly belongs to revenue. Earnings do not always rise in proportion to capital: competition is nowhere so active as in America, while the expenses must rise rapidly as the line grows older. The American railway system does not average six years of age. This is only about sufficient to wear out the rails and sleepers, and much of the machinery. The depreciation is rapid and enormous, yet renewal-accounts are scarcely ever thought of. The restoration of establishment comes suddenly—an overwhelming charge, which revenue cannot bear, and which capital should not. The limit of expenses is not yet reached in America.

Yet the future is considered to be encouraging, and an intelligent spirit of reform is said to be already at work.

"We hear on all sides," observe the authors, "that 'we *must* have better tracks,' and 'we *must* burn coal;' and these convictions once fixed, it is not probable that either engineers, managers, stockholders, or the public, will rest satisfied until we have as really good and durable railways as any part of the world can furnish. The best are cheapest. Earthwork and ballast, the foundation of the whole, have hardly yet received their due attention, but their importance cannot be much longer neglected. In the meantime, a decided movement is going on in favour of lighter and better iron, and this will not stop, until full advantage is taken of such principles of form as science and practice have alike proved to be best. Joints are receiving remarkable attention, and it is only hoped that railway men will not imagine that these are the only subjects for improvement. In burning coal, a decided step has been taken at last, in agreement with the simplest principles of combustion, viz. the introduction of jets of air above the coal, the use of fire-brick to furnish heat to ignite the carbureted hydrogen when it has combined in the proper equivalent with oxygen; and, lastly, the employment of the combustion-chamber to afford space and time for the flame to develop itself. With better roads, we shall be able greatly to reduce the dead weight of our engines and cars. And we shall be able to attain to a much higher speed than is maintained at present."

A large edition of the work under notice has, it seems, been already absorbed in the United States, a hopeful circumstance this itself; and it contains much matter of utility to the engineering profession and railway managers in England, as well.

FALL OF A TUNNEL ON THE HAMPSTEAD AND CITY RAILWAY.

THE Hampstead and City Junction Railway is a loop of the North Western Railway, which it joins at Camden-town, and then running northwards, with extraordinary curves, as far as Parliament-hill, turns to the west, and, dropping southwards, goes past Kensall-green. From Downshire-hill to the Finchley-road it will run in a tunnel under the Rosslyn estate, and this is in progress of formation. Mr. George Berkley is the engineer, and the present contractors for the part of the line in question are Messrs. Oliver, Banks, and Barton. On Sunday last a part of this tunnel fell in, but fortunately without accident to life, although many men were present. It appears to have been driven in to the extent of 200 feet, as we are told, by the weight above. The bottom of the tunnel is said to be 130 feet from the surface of the ground; and this mass of earth, including water and quicksand, has fallen in, taking with it, in one part, an engine-house, with shaft and machinery. The arch was formed with seven rings of brick-work in mortar. The loss, it is unnecessary to say, will be very great, and a serious question will arise as to the parties who will have to bear it. For the re-construction, we hear on the ground, Staffordshire blue bricks set in cement will be used.

SYMBOLICAL SIGNIFICATION OF THE PEACOCK.

IN reference to the notice, by Mr. Charles Lock Eastlake, of the sepulchral remains recently brought to light in the Prato Corvo, near Rome,* in which he mentions the peacock occurring on the walls of a chamber "as an emblem of the Resurrection," to which, in the printed letter, a note of editorial doubt is affixed; permit me to remark, that Mr. Eastlake is probably quite right in his description of the bird there represented, though he is most probably wrong touching the meaning of it. The phœnix is the symbol of the Resurrection: the peacock was a Gentile symbol for the immortal soul; subsequently introduced by the Christians in the same sense.

We see the phœnix, with a glory of rays round its head, perched upon the palm-tree—the Tree of Life—as a symbol of the resuscitated and glorified body, in the mosaics of various Roman apsides. There is a well-known and very good specimen of this in the apsis of the church of the Saints Cosma and Damiano. We also see a similar bird perched upon the Tree of Life in the Paradise represented in the apsis of S. Giovanni Laterano. Other instances of this might be mentioned. Between the phœnix and the palm-tree (the date-palm, *phœnix dactylifera*), there was also understood to be a recondite connection.

If Mr. Eastlake has erred in the interpretation of the peacock, he has the learned St. Augustine to keep him countenance in the mistake. In the opinion of that eminent Father of the Latin Church, the Christians did consider the peacock to be a symbol of the resurrection of the body, because its flesh was believed to be incorruptible. See the remarks of Monsieur le Dr. Comarmond, in his well-digested notice of "The Monuments of the Musée Lapidaine, of Lyons." The peacock, however, never takes the place of the phœnix in apsidial mosaics; nor does the phœnix ever take the place of the peacock on Christian sepulchral urns and other monuments.

The immortal Christian soul was figured less frequently by the peacock than by the dove. We may see the disciples of our Lord figured as doves on the apsidial cross in S. Clemente. As doves Christian souls are found figured on mural tablets, on baptismal fonts, and on sarcophagi. Less frequently they are figured as peacocks, on sarcophagi; and, as far as my own observation goes, with one exception, on sarcophagi only: however, the Gentiles thus represented them on the walls of sepulchral chambers, and in scenes of the Paradise of Osiris. On a sarcophagus in the Museum of the Lateran, are two doves on a cross, surmounted by the monogram of Christ within a wreath. This device may be frequently seen. In the Musuem, at Ravenna, there is a sarcophagus representing ,a peacock and a palm-tree, on each side of the monogram of Christ. On a most interesting sarcophagus in the cathedral of Vienne, in Dauphinè, two peacocks are represented feeding on a vine that grows out of a chalice.

On that unique ivory tabernacle preserved in the sacristy of the Cathedral of Sens, of which the Arundel Society has published an illustration, we see a pine cone taking the place of the cross, or the diagram of Christ, and on each side of it a peacock, representing, not the souls of Christians merely, but the souls of martyrs, for each peacock has a small palm-branch attached to its neck. In a very remarkable tablet in the church of St. Mark, at Venice, a cast of which is in the Crystal Palace, and another in the South Kensington Museum, two griffons take the place of the peacock, and stand one on each side of a vase from which proceeds a vine; and that there might be no mistake as to what this vase is supposed to contain, the Thyrsus of Bacchus is placed within it.

The Egyptian conventional symbol for the soul was, as every archæologist knows, a sparrow-hawk with a human head: the great doctrine of the resurrection, however, well known to the ancient Egyptians, as we may learn by their monuments, and as St. Augustine expressly declares, was set forth by them under the truthful representation of the human form divine, as we may see on the walls of certain tombs at Thebes. In later times, and among the Romans, the souls of the departed, in the Paradise of Osiris, were figured as doves and peacocks. In a fresco painting that once existed at Pompeii, on the wall of a small atrium in a house near the gate, a copy of which was made by Francesco Morelli in 1812, and was engraven and published at Naples in 1833, symbolical souls as doves and peacocks are represented perched on the sacred trees, the palm and the peach tree, in the Paradise of Osiris and Isis. In this fresco was also represented the heron, the symbol, according to Monsieur Le Vicomte Emmanuel de Rougé, of the first transformation of the soul in this mysterious Paradise. I do not remember ever seeing this bird on Christian monuments, but the phœnix as commonly shown is not much unlike it.

H. C. BARLOW.

*** It was doubtless Mr. Eastlake's purpose, in his query as to the peacock, to call forth just such communications as this of Dr. Barlow (which is both interesting and curious) on the subject. As regards our own note, keeping a like purpose in view, we did not intend to question the probability that it might be the peacock, unless the bird depicted stood in such co-relationship to its surroundings as obviously to be intended "as an emblem of the resurrection;" in which case (and we understand Mr. Eastlake's suggestion to imply this) we were of opinion that it might be intended for the phœnix, as that bird was imagined to be peacock-hued.

It is singular, however, that just as Dr. Barlow shows the occasional identity of symbolical meaning between the peacock and the dove, so Higgins, unquestionably a man of great learning on such subjects, points, in his "Anacalypsis," at the probable identity of symbolical meaning between the dove and the phœnix. Thus, in speaking of the dove of Venus as "a maenad, or fanatic bird, crucified on a wheel with four spokes," the dove being called "Inyx;" and, in correlation with these symbols, also alluding to the fact that Semiramis is described as having fled away, changed into this dove, when conquered by Staurobates, who had threatened to "nail her to a cross" (which is identified with the four-spoked wheel in the "eternal crucifixion of Ixion the accursed," or the wheel of execution described by Pindar), Higgins goes on to say;—Staurobates may have meant cross-borne: it might also mean the phœnix or palm-tree cross: Phœnix, he adds, "was the bird of paradise and of the morning; also a tree; and on the boss of Achilles's shield was a palm or phœnix tree." The dove, crucified on a wheeled cross, is curious as a heathen symbol, in connection with what Dr. Barlow describes as a frequent Christian symbol, namely, two doves on a cross. The association between the peacock and the palm-tree, to which Dr. Barlow alludes, is also interesting. Moreover, as man is said to have been made "a living soul," and as the "immortal soul" is, at all events, included in the "resurrected" and immortal body, the symbols of the one may well be closely mixed up with those of the other. Thus if the palm-tree, as denoting the tree of life [Egyptian mythology, by the way, appears to point to the pomegranate as the tree of life, and this accords with the symbol of the pome or apple], be also symbolical of the resurrected body, as its correlative or alternative, the phœnix, is said to be, the soul inhabiting that body might be denoted by the peacock perching on it; but if the peacock and the dove be symbolically identical, as indicated, may it not be questionable after all whether the symbolical meaning of either really be the *soul* and not the *Spirit;* for the dove, in fact, does denote the Holy Spirit; and is it not more probable that doves, indicating our Lord's disciples, did so, as signifying that each of them possessed that Spirit, than that these doves denoted their own souls? Even among the heathen the dove denoted a spirit of prophecy, or divine afflatus; and the oracles were called doves,—Columbæ by the Latins, for example. Thus, too, Herodotus says that the "black dove" who founded the oracle (and *colony ?*) of Dodona was an Egyptian woman, and hence called a black dove. That strange fellow, Count Cagliostro, by the way, who pretended to be an Egyptian "grand coptha," called a boy, whom he used as an oracle, to see visions in a magical crystal,—a "Colomb."

All such significations and analogies appear to be rather against the usual interpretation of the symbolical meaning of the peacock than in its favour; and either St. Augustine may be right (as it is "the spirit" which "quickeneth" the dead body in "the resurrection") in regarding the peacock as denotive of the resurrected body of the immortal man or "soul;" or it may have simply denoted the resurrected,—having both "body and soul and spirit." Indeed, one cannot well see how a symbol of the resurrection of the body can exclude the soul in that body, so that the phœnix itself may be regarded as indicating both in *one*.

The pine *cone* taking the place of the cross, or

* We regret that we have accidentally led some of our contemporaries to ascribe the article here referred to, signed "Charles L. Eastlake," to the president of the Royal Academy. The interesting communication in question is by Mr. Chas. L. Eastlake, a nephew of Sir Charles, and who is still in Italy.

the diagram of Christ, with a peacock on each side, in Sens Cathedral, bears curiously on the Assyrian pine cone *as an offering* to the sacred tree.

BUILDING STONES USED EXTERNALLY IN AND NEAR THE METROPOLIS.

MANY stones having been introduced into London since the publication of the Commissioners' Report, a list pointing out those previously used, together with the new ones, naming also the structures in which they are employed, will, no doubt, be found very serviceable to the profession. This list is compiled from the descriptions which have appeared in the public prints of the various buildings, and I fully believe it may be relied upon. In some few particulars it might be more definite, as stating from which quarries all the Bath and Caen stones have been derived. Perhaps some of your readers may be able and willing to add this information.

Under one or two headings, such as Portland stone, a longer list of buildings could have been given, but the purport of the whole would not have been improved.

The buildings where these stones are employed have been in some instances cleaned down, perhaps more than once: this should be borne in mind when viewing the present state of the stone; and such examples as are noted for having been painted over, may perhaps have been so treated from a desire of cleanliness, rather than from the actual decay of the material.

I had some idea at first of adding to the list those buildings that have been cemented, commencing from about Adam's time, many of which present a better appearance than the stones themselves; but as our endeavour is to procure a good and serviceable stone, it was needless to encumber your pages with such memoranda.

1. *Anston Stone. See* 27.

County Fire Office, Cornhill, 1854-5.
Museum of Practical Geology, Piccadilly, 1837-48.
Seal and Co.'s Bank, Leicester-square, 1856.
New Hall, Lincoln's-inn (and red brick), 1843-5.
Houses of Parliament, 1840-57.
Ordnance Office, Pall-mall, the part in 1851.
St. Stephen's Church, Rochester-row (and Sneaton Rag stone), 1847-50.

2. *Aubigny Stone.*

Part of 81 and 82, Pall-mall (Schomberg House), 1851.

3. *Bargate Stone and Bath Stone Dressings.*

Holy Trinity Church, Vauxhall Bridge-road, 1849-52.

4. *Bath Stone. See* 3, 10, 12, 17, 20, 27, 31.

Houses, Dean's-yard (Box quarry), 1852-4.
(R. C.) Chapel, Duncan-terrace, City-road (with brick), 1841.
New College, Finchley New-road, 1850-1.
Lady Owen's Almshouses, Goswell-road, 1840-1.
St. Mary's (R.C.) Church, Grove-road, St. John's-wood, 1833-4.
St. George's (R.C.) Church, Lambeth-road (Coombe Down in ornaments, Caen stone mouldings, &c.), 1840-8.
All Souls' Church, Langham-place, 1822-5.
St. James's Church, Liverpool-road, 1837-8.
St. Thomas's Church, Orchard-street (Box-hill), (with brick), 1857-8.
Apsley House, Piccadilly, 1828.
St. Luke's Church, Chelsea, 1820-4.
Exeter Hall, Strand entrance, 1830-1.
Plowden-buildings, Middle Temple (with brick), 1830-1.
St. Anne's Chapel, Wandsworth (with brick), 1820-2.
St. Paul's Church, Westminster-road (Box-hill), 1851-7.
Henry VII.'s Chapel, Westminster (Coombe-down), refaced, 1809-22, now mouldering away.
Christ Church, Woburn-square (with brick), 1831-2.
Buckingham Palace (Monkton Farleigh) 1825-7.

5. *Bramley-fall Stone.*

London and Westminster Bank, Lothbury (plinth only), 1837-8
Southwark-bridge (and Whitby stone), 1814-9.
Blackfriars-bridge (see 11), parts of parapet, 1838.
Euston-square Railway Station, entrance gateway and lodge, 1837-8.

6. *Broomhill Stone. See* 18.

7. *Burford Stone, Oxfordshire. See* 15.

8. *Cadeby Stone, near Doncaster.*

Portico of Day and Martin's, High Holborn (now painted).
Almshouses at Edgeware.

9. *Caen Stone. See* 4, 17, 19, 21, 27.

Chambers, &c. 22, Basinghall-street, 1856-7.
Baptist Chapel, Bloomsbury-street (with brick), 1848; cleaned down, 1858.
St. Martin's Schools, Castle-street, Long-acre (with red brick), 1850.
Baths and Wash-houses, Greenwich (with red brick), 1851.
Mark-lane Chambers (upper part; lower part, Portland stone), 1856-7,
No. 116, Piccadilly (H. Thomas Hope, Esq. M.P.), 1849-50.
Conservative Club, St. James's-street, 1844.
Buckingham Palace, east façade (painted over), 1846-7.
St. Jude's Church, Turk's-row, Chelsea, 1843-4.
Henry VII.'s Chapel, Westminster, 1502-20 (refaced with Bath stone, 1809-22).

10. *Chapel Town (near Leeds) Rubble Stone and Bath Stone Dressings.*

St. Anne's Church, Highgate-rise, 1852-3.

11. *Craigleith Stone.*

House in Queen Anne-street, Cavendish-square (no appearance of decay at the time of its being painted over in 1840), 1760.
Blackfriars-bridge (see 6), repairs in 1838-9.

12. *Flint Walls and Stone Dressings.*

Christ Church, Chiswick, 1843.
Christ Church, Croydon, 1851-2.
St. Peter's Church, Croydon (Maidstone stone facing), 1849.
St. Paul's Church, Dorking (Bath), 1856-7.
Hanwell New Church, 1842.
St. John's Church, Kensall-green (brick), 1843-4.

13. *Godstone Stone. See* 15.

14. *Granite.*

Bow-bridge, over the River Lea (Aberdeen) 1838.
Duke of York's column (pale red), 1830-6.
Christ's Hospital, arcade of hall (Haytor), 1825-9.
Carlton Club-house, Pall-mall (columns of red Peterhead), 1847 and 1854.
General Post-office, St. Martin's-le-Grand (lower part, Grey), 1823-29.
Nelson Column, Trafalgar-square, 1843.
London-bridge, 1824-31.
Waterloo-bridge (Cornwall), 1811.
Somerset House, river front, lower part of arcade (much disintegration), 1776-92.

15. *Great Barrington Stone, Gloucestershire; or Godstone, in Surrey.*

Westminster Abbey Church, 1245-1307. "Mouldered away 4 inches deep," Sir C. Wren; who used stone "from near Burford, Oxfordshire" in the reparations on north transept, north side of choir, &c.

16. *Hare-hill Stone, near Leeds.*

St. Olave's, &c. Grammar Schools, Tooley-street (parts), 1853-5.

17. *Kentish Rag, and Bath Stone Dressings.*

All Saints' Church, Acton-street, Hoxton, 1857.
St. Philip's Church, Arlington-square, Hoxton, 1855-7.
St. Margaret's, or Broadway Chapel, Westminster, 1841-3.
Mansion-house Chapel, Camberwell (? Caen stone), 1852-3.
St. Michael's Church, Chester-square, 1844-6.
Congregational Church, Clapham, 1851-2.
Ealing Church, 1850.
St. Mary's Church, Earl's-court, Brompton (Coombe-down Bath stone dressings and Caen stone parapet and cornice), 1849-51.
Christ Church, Endell-street, St. Giles's, 1844-5.
St. Mary's (R. C.) Church, Farm-street, 1846-9.
All Saints' Church, Finchley New-road, 1845-6.
Trinity Church, Bishop's-road, Bayswater, 1845-6.
St. Matthew's Church, Great Peter-street, Westminster, 1849-51.
St. Stephen's Church, Hammersmith, 1849-50.
St. Mary's Church, Johnson-street, Commercial-road East, 1849-50.
St. John's Church, Notting-hill, 1844-5.
Wesleyan Chapel, Liverpool-road, 1849-50.
St. Helen's (R. C.) Church, Westbourne-grove North (Box-ground Bath stone), 1852-3.

18. *Kentish Rag and Broomhill Stone (Kent) Dressings.*

St. Michael's Church, Wood-green, Tottenham, 1843-4.

19. *Kentish Rag and Caen Stone Dressings.*

Holy Trinity (R.C.) Church, Brook-green, Hammersmith, 1851-2.
All Saints' Church, Cambridge-place, Paddington, 1850.
New City Prison, Holloway, 1849-52.
St. Barnabas's Church, Pimlico, 1846-9.
St. Alexis (R.C.) Church, Fitzroy-place, Kentish-town, 1849-50.
St. Mark's Church, Rosherville, 1853-4.
Christ Church, Highbury-grove, 1848.
St. Barnabas's Church, Homerton, 1845-7.
Holy Trinity Church, Milton, next Gravesend, 1844.
St. Mark's Church, Old-street-road, 1846-8.
St. Gabriel's Church, Warwick-square, Pimlico, 1852-3.
Chapel to Consumption Hospital, Brompton, 1849-50.

20. *Kentish Rag and Corsham Bath Stone Dressings.*

All Saints' Church, Blackheath, 1857-8.

21. *Kentish Rag, Hammer-dressed Yorkshire Stone Facing, and Caen Stone Dressings.*

St. Giles's Church, Camberwell, 1842-4.

22. *Ketton Stone, Rutlandshire.*

Schools, &c. Fulham (with brick), 1854-5.
Messrs. Parfitt's, Jermyn-street (with brick), 1857.
St. Dunstan's Church, Fleet-street (upper part), 1831-3.

23. *Portland Stone. (All edifices of importance from about* 1600 *to* 1800).

St. George the Martyr Church, Borough High-street (dressings, with brick), 1734-6.
St. Margaret's Church, Broad Sanctuary, Tower recased, 1735.
York-stairs Water-gate, 1626.
Law Institution, Chancery-lane, 1831-2.
Ditto, additions, south side, 1856-7.
Chelsea Hospital (with brick), 1682-92.
St. Matthew's Church, Bethnal-green (brick), 1740-6.
St. Ann's, Limehouse, 1712-29. (Repaired after the fire, 1850.)
Christ Church, Spitalfields, 1723-9.
Coldbath-fields Prison—the Gate, 1793.
Dyers' Hall, College-street, 1856-7.
English, &c. Bank, Cornhill, 1856-7.
St. Paul's Church, Covent Garden, 1788.
St. Pancras New Church (body only, terra cotta ornaments), 1819-22.
Legal, &c. Assurance Office, Fleet-street, 1838.
Goldsmiths' Hall, Foster-lane (Waycroft quarry), 1829-35.
Greenwich Hospital (east end, Roche Abbey stone ?), 1664—1752.
Queen's Insurance Office, Gresham-street, 1852.
St. Giles's Church, St. Giles-in-the-Fields, 1730-4.
Stone Buildings, Lincoln's-inn, 1756.
St. Mary Woolnoth Church, Lombard-street (cleaned down, 1857), 1716-9.
Pelican Insurance Office, Lombard-street (painted cir. 1855), 1756.
St. Margaret's Church, Lothbury (cleaned down 1858), 1690.
London and Westminster Bank, Lothbury (plinth of Bramley Fall stone), 1837-8.
Custom-House, 1813-7.
Mark-lane Chambers (lower part—upper part Caen stone), 1856-7.
Clothworkers' Hall, Mincing-lane, 1858.
The Monument, 1671-7.
St. Marylebone New Church, Marylebone-road, 1813-7.
Christ's Hospital, Newgate-street (upper part of hall), 1825-9.
Reform Club-house, Pall-mall (Waycroft quarry), 1838-9.
General Post-office, St. Martin's-le-Grand (upper part), 1823-9.
St. Paul's Cathedral (Grove quarries), (west front cleaned down in 1852), 1675—1717.
Chambers, Staple Inn, Holborn (with brick), 1843.
Somerset House—parts now decaying (also Purbeck and Moor stone), 1776-92.
Blackfriars-bridge (parts refaced 1838, with Bramley Fall stone), 1760-70.
Old Westminster-bridge, 1739-50.

24. *Prudhoime, or Prudham Stone, Northumberland.*

Freemasons' School for Children, Wandsworth-common, 1851-2.

25. *Reigate Stone and Bath Stone.*

Asylum for Idiots, Red-hill, 1853-5.

26. *Roche Abbey Stone. See* 23.

27. *Sneaton Rag Stone (Whitby, Yorkshire), with Dressings. See* 1 *and* 5.

St. Paul's Church, Herne-hill (Box Bath stone dressings), 1845.

St. Stephen's Church, Rochester-row (Anston stone), 1847-50.

Infant Orphan Asylum, Wanstead (Caen and Bath stone), 1841-3.

St. Andrew's Church, Wells-street, Oxford-street (Bath stone), 1845-7.

28. *A "Somersetshire Stone."*

Columns to the Colonnade, Opera-house, Pall-mall side (now painted), 1818-20.

29. *Steetley Stone.*

One of the Courts of the Houses of Parliament.

30. *Swanage Stone.*

London, &c. Law Life Assurance Office, Fleet-street, 1853-5.

31. *Swanage Stone and Bath Stone Dressings.*

St. Stephen's Church, Avenue-road, 1849.
St. Mary's Church, Ewell, Surrey, 1847-8.
Trinity Church, Haverstock-hill, 1849-50.
St. Paul's Church, Nelson-street, Bermondsey, 1847-8.

32. *Whitby Stone, Yorkshire. See* 5, 27.

Highgate Cemetery (Egton quarries), 1838.

33. *Yorkshire Stone Facing. See* 21.

WYATT PAPWORTH.

SPITALFIELDS.

SOME years have passed since we first directed attention in this journal to the sad condition of the weavers of Spitalfields. We pointed out then, with regret, the decline in the amount of their earnings in times of pressure, and mentioned that when trade grew brisk the wages had seldom risen. Since that time prices have continued to decline, and are now so low that many skilful weavers, by working fourteen hours a day, can only earn from 9s. to 10s. in a week. The condition of the women and children who "reel the thread" is much worse; and bad as this aspect of affairs is to those employed, several thousands of these workers are worse off, for they have little if any employment at all.

Our experience of various of the suffering classes of the metropolis, and of some other parts of the country, leads us to form a high estimate of the honesty and persevering industry of the Spitalfields weavers.

In order to have room for their lathes, it is necessary that they should have apartments of considerable size, for which the rent amounts to from 3s. to 3s. 6d. a-week. In the winter-time, the long hours of darkness during which they are forced to work causes an outlay of from 1s. 6d. to 2s. a-week for oil for the lamps. Deduct these sums from 10s. a-week, and only 5s. are left for subsistence. We could tell sad tales which were related to us during a recent visit to some parts of Spitalfields. The want and starvation have been dreadful: piece by piece, furniture has been sold or otherwise disposed of; and in many instances the bread-winner, the loom, has been taken away, and families are left entirely destitute. No one can see, without pain, a large population like this, who would gladly work, sinking, with the children who surround them, into deep and almost hopeless poverty. Much temporary good might be effected by those who lead the fashion, if they would use the silks and velvets of this particular manufacture. We know well the difficulty there is in this, and that ladies have notions in connection with articles of dress which must not be disputed; and yet we ask for consideration for the condition of the Spitalfields weavers. They make a good, useful article, which, taking into consideration the present price of raw silk, is sold at a fair and moderate cost.

The weavers, driven to our shores for conscience sake many years ago, have been, taking everything into consideration, a credit to our population, and deserve help.

They would much rather work than receive parish relief or other charity. Having said this much, we earnestly, and with the kindest feeling, ask the workers of Spitalfields to consider on their side the difficulties in which they are, the constant decline of prices during the past fifty years, and the prospect of still further decrease, and decide if it be wise to bring up their children to the trade, and thus make the number of workers greater than the demand for production warrants. We are sure that our object will not be mistaken by the very intelligent men and women who work at this trade when we remind them that in former years, even as far back as George the Third's reign, there have been in Spitalfields times of great distress, and that these have constantly recurred.

Let them look too at the gradual reduction of prices, until even constant work is little better than starvation. The distaff, the hand-looms for weaving various fabrics, the hand-work of the manuscript writer of books, the knitting-needle of the stocking-maker, the stage-coach, and other matters, have succumbed before the progress of steam and other agencies; and, much as we may regret it and sympathize with the suffering which exists, we are forced to express an opinion that, before long, the hand-loom work will cease to be in demand. Our object in saying this is to ask parents in Spitalfields to use every exertion to place their children to other trades. This we know well is no easy task; still a vigorous effort should be made to accomplish such a desirable object: there are the navy and the merchant service for boys, which would be infinitely better than the long and ill-paid for hours amongst the silk webs. Weavers, it is said, in agricultural districts, make good colonists (Dr. Livingstone was a weaver), and it might be well worthy of the consideration of the Government to offer to them some means of emigration on a useful scale. Meanwhile assistance is immediately needed to an extent which can be only judged of by those who have inquired on the spot. Those who are helping in distant lands should not forget the wide-spread destitution which exists at home.

LONDON UNITED BUILDING TRADES' SOCIETY.

"THE artizans in the employ of a builder having attended the funeral of a shopmate, who unfortunately died from the injuries he sustained through having fallen from a scaffold, and who, like working men generally, left his wife and children without any means of support—they, the artizans, seeing how suddenly the thread of life is sometimes cut, and not knowing how soon their own children, like those of their deceased shopmate, may be fatherless and destitute, resolved at once to form themselves into a Society, and invite their fellow-workmen to join them, and contribute with them one penny per week each man, for the purpose of raising a fund, to be termed 'The London United Building Trades' Orphan Asylum Fund,' from which the children of members who may unfortunately be deprived of their father shall receive such assistance as the members shall consider the funds will admit of; and ultimately, when the Society shall possess funds sufficient, to obtain an asylum wherein to place those children, where they shall be provided with food and raiment, and good moral teaching and instruction."

This is the substance of an address which has been issued to the building trades, and we have been requested to make it known. The secretary, Mr. Arscott, states that the Society has been in existence six months, numbers 200 members, and has already twelve guineas in the bank. "The Society meet every Monday evening at eight o'clock, at the Alma Coffee-house, Star-street, Edgware-road, where any information relative to it may be obtained."

We have the greatest respect for all such efforts, and cordially wish it success. It is, nevertheless, to be regretted, as we have before now urged, that there is not one properly organized all-embracing guild for the building trades in lieu of a number of disjointed societies for separate purposes. Expenses would thus be lessened and safety ensured.

LEEDS TOWN-HALL.

PENDING such particulars as we may give hereafter, it will be right to name the contractors for the various works:—Mr. Samuel Atack, Leeds; Messrs. Addy and Nichols, Leeds; Messrs. Matthew, Firth, and Co. Bradford; Messrs. Webster and Son, Leeds; Messrs. Singleton and Tennant, Leeds; Messrs. Nelson and Sons, Leeds; Messrs. Hummerston, Brothers, Leeds; Mr. Thomas Hall, Leeds; Messrs. Haden, Trowbridge; Mr. Charles Smith, Birmingham; Mr. John Thomas, London; Mr. Frederick Dent, London; Mr. Warner, London; Messrs. Winn and Brothers, Calverly; Messrs. Thorp and Atkinson, Leeds; Mr. Thos. Whiteley, Leeds; Messrs. Gray and Davison, London; Messrs. Balmforth and Smith, Rodley; Messrs. Robert Harrison and Co. Leeds; Messrs. E. Maude and Son, Leeds; Mr. Francis Danby, Leeds; Messrs. Minton, Hollins, and Co. Stoke-upon-Trent; Messrs. J. Heap and Co. Leeds; Mr. J. G. Crace, London; Messrs. Osler, Birmingham; Mr. Ratcliff, Birmingham; Messrs. Defries, London; Messrs. Joy and Holt, Leeds; Mr. Jas. Hartley, Manchester; Mr. William Wright, Leeds; Mr. John Haigh, Halifax; Messrs. Child and Pickles, near Bradford; Mr. Joseph Slater, Bradford; Messrs. Hobson and Yeoman, Kirkstall-wood; Mrs. Mawer, Leeds; Mr. H. Wilde, Manchester; Mr. Thomas Mathews, Leeds; Messrs. Kendell and Co. Leeds; Messrs. Edmundson and Sons, Manchester; Mr. Dominico Brucciani, London. Mr. John Robinson, clerk of the works.

The total cost of the building, including the interior fittings and decorations, and the organ, together with the land, will exceed 100,000*l.* to be raised by rates levied upon the inhabitants of the borough.

The architect, Mr. Brodrick, was presented to her Majesty.

The cost of the decorations in the hall and vestibule, by Crace, was 1,600*l.*

ANCIENT DOMESTIC ARCHITECTURE, CLUNY, FRANCE.

AT about four leagues from Macon, upon the borders of Burgundy, stands the pretty little city of Cluny, concealed amongst lofty mountains still covered with forests. Built on the side of a high hill, it extends down into the valley, just where the river that waters it forms a bubbling cascade. With its ancient houses, bastions, city-walls, and the remains of the ancient abbey, it inspires thoughts of the Middle Ages, and suggests a time when Cluny was of more importance than it is now. A glance serves to show how much this importance depended on the abbey. On the site of that building are now united the infant-school, the prison, the assembly-room, the law court, and the theatre, while its vast cloisters form the recreation-place of the inhabitants.

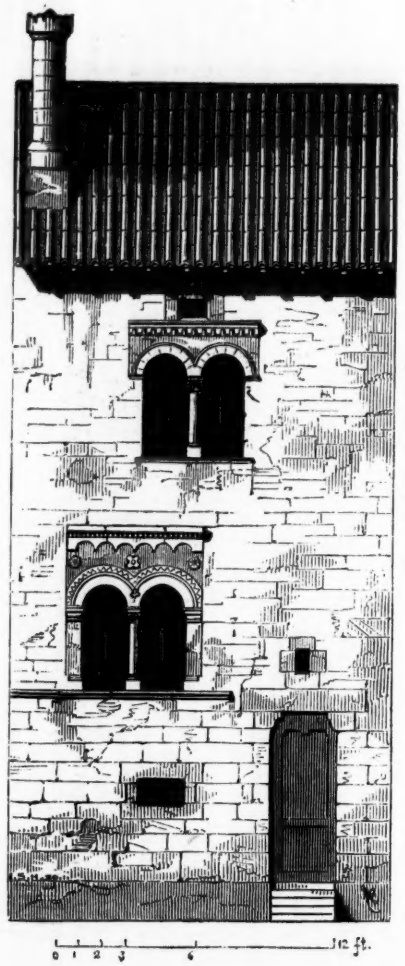
In respect of civil architecture, Cluny offers to the architect and antiquary curious and interesting specimens of the twelfth century, and the thirty or forty houses preserved in this town are good examples of the Romanesque period, almost intact, although they have had to travel through six centuries or more to come down to us. Nor will the goodness of their condition astonish us more than the taste and skill they manifest. We have chosen three of these legacies of the past, to show the residences of the townsmen of that period. As in all cases where many are gathered together within fortified walls, the frontage of each is small.

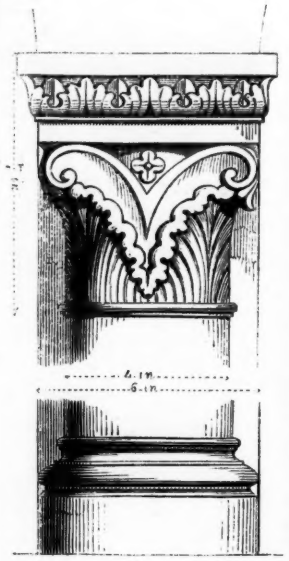
The house, of which we give a perspective view in the next page, is remarkable for its general harmony. It was doubtless the residence of a dealer well to do, and one feels that a certain degree of comfort reigns in the first-floor, presenting, as it does, externally, three arches, in the tympanum of each of which is opened a small square *oculus* for ventilation or additional light. The dressings of the windows are of stone: the rest of the building is of rubble work, covered with a composition of lime and sand. The roof is steep, and projects at the foot considerably before the face of the wall. It will be noticed that the shop preserves its ancient shutters, composed of fixed flaps, the upper opening horizontally from the transom, to serve as a shade from the sun, and the lower part as a stall-board. The chimney consists of a trunk about 6 feet long, which gets smaller towards the top, and ends in a column surmounted by a cone, pierced with openings, to allow the passage of the smoke.

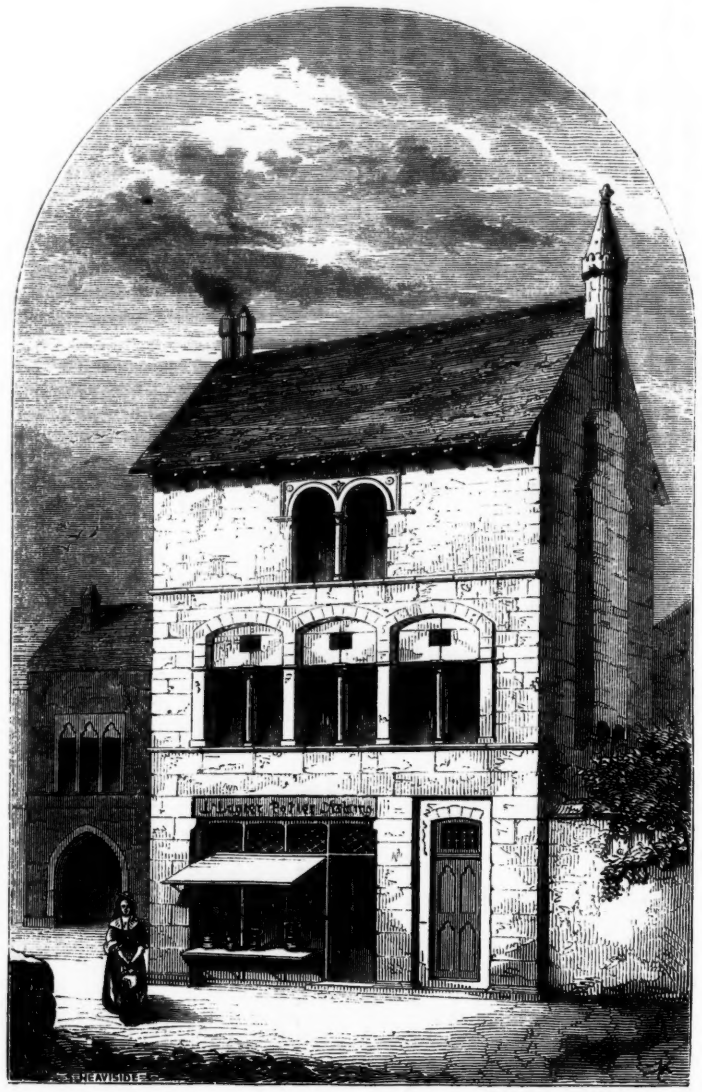
The ground-floor of the house represented by the engraving on the right is occupied as a shop, and the entrance-door has its *oculus* above. The arrangements of the first and second stories agree in general character, but differ in the details. We give the centre pier on the first floor to a larger scale,—1-20th full size.

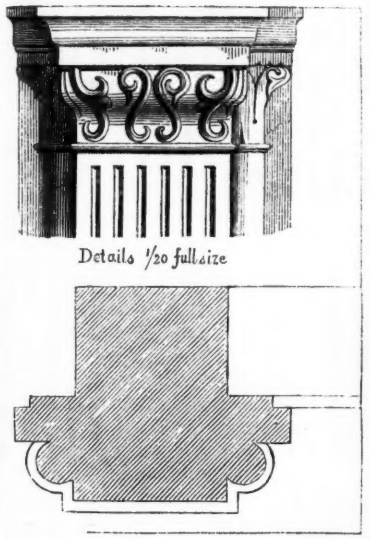
The third house is a town trader's house *par excellence*,—that of a shopkeeper, perhaps, who had retired from business enriched by his industry. A small door gives entrance on the ground-floor, and near it a rectangular opening admits a few rays of light to an apartment serving as a cellar. On the first floor is a double window divided by a column, with semicircular arches, adorned with delicate ornamentation, and surmounted by a length of horizontal cornice. The upper-floor shows the same arrangement with greater simplicity. A small amount of art is here well placed.

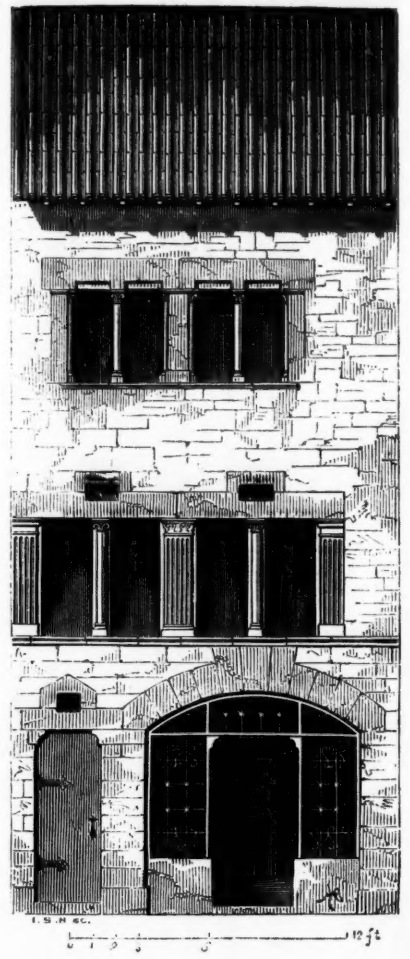
We give the capital of the column of the window on the first floor, 1-15th of full size.











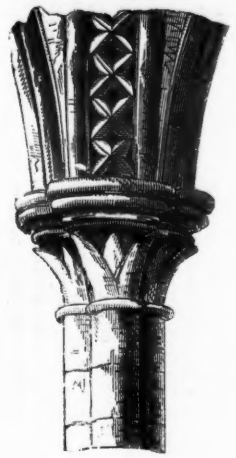
ANCIENT DOMESTIC ARCHITECTURE, CLUNY, FRANCE.

Twelfth Century.

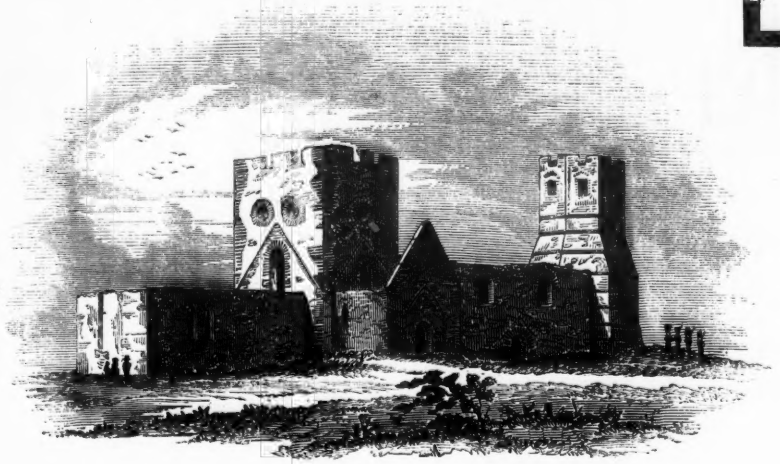
SEDILIA PISCINA & BRACKET

AT N.W ANGLE OF TOWER

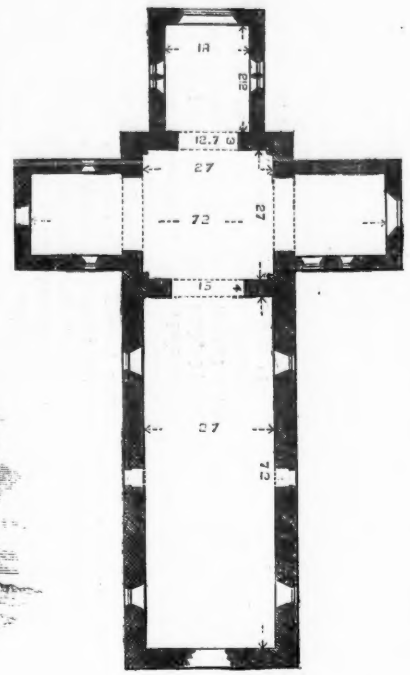
VIEW LOOKING EAST



AT N.E. ANGLE OF TOWER



NORTH EAST VIEW



PLAN

THE ANCIENT CHURCH IN DOVER CASTLE.

CHURCH OF ST. MARY, IN THE CASTLE, DOVER.

ENTHUSIASTIC antiquaries have referred the date of this church to the legendary age of an apocryphal King Lucius, or the period of the mission of St. Augustine. It may safely be attributed to the interval between the conversion of the Saxons and the accession of King Alfred. In the seventh century, King Idbald, 616-40, founded a college of secular canons in this place, to minister to the garrison. The combination of military and ecclesiastical structures within one inclosure occurs at Exeter, Porchester, in the Tower of London, and in the very interesting instance of St. Germain's Cathedral, and Peel Castle, in the Isle of Man. Three chaplains were left after the removal of the clergy to St. Martin's-le-grand, in 691. There were three altars,—the high altar, and those of St. Mary and the Holy Reliques; the latter probably occupying the lateral spaces on either side of the rood screen, as in Continental churches. The monumental stone of Henry Earl of Northampton stated that his "body and monument had been removed to Greenwich, by reason of the ruinous state of this chapel, A.D. 1696." The decay of the church and its disuse may be fairly attributed to the latter end of the seventeenth century, and its subsequent injuries to the carelessness of the Board of Ordnance. In 1635, the church and its monuments were in complete repair.

This venerable building has been constantly threatened with demolition from 1800 until last year. Grose, Darell, and others have given external views; but Malcolm, alarmed at the prospect of its destruction, and compelled to take a drawing by stealth and at all risks, has preserved to us a very valuable prospect from the south to the north transept. Rickman very significantly alludes to the walling up of the entrance, and suggests that the closed apertures permit no view of the interior. Mr. Britton was positively refused admission by the Duke of Wellington, when Lord Warden. Military jealousy and some slight apprehension of popular disgust at the profanation of this church have hermetically sealed it. It was in 1855 only that Lord Panmure, then at the head of the War Department, promised it should be cleared of coals—it is a coal-cellar!—and kept more decently and respected for the future. His lordship promised; but his orders, if issued, were never carried into effect. The Pharos was, however, on the remonstrance of the Archæological Institute, rescued from an abominable misuse, to which it had been put by the Royal Engineers.

Mr. Essex, in his MS. notes, thus describes the church:—"The remains consist of ragstone and Roman bricks. In the middle tower there are yet remains of arches, but they have undergone several alterations, particularly the addition of stone-work to the arches, most of which seem about the time of Henry III. or the earliest in the time of King Stephen." Rickman makes the following observations, which are open to some cavil:—"The chapel is a cross. There is a door on the south side, now stopped, but built with a Roman brick arch of two tiers, like Brixworth, but it has no dripcourse. There are other apertures with bricks, but which do not appear to be original. There is some Decorated and some Perpendicular stonework in the chapel. There are several round apertures, but most likely not original. The tower is short, large and square. The parts of the cross are small, except the west. One door has an impost and small stone, not bricks, for an arch: the bricks are intermingled with stones, which seem Kentish rag. The whole masonry is very rough, of bricks, rag, and flint intermixed.

Having had the advantage of making such a survey of this "piece of rare architecture," as the coals and rubbish permit, we offer our notes to the reader, in the hope that they may awaken his interest and promote the restoration of the church. The original windows were all formed with tiles, and the arches turned with the same material: from the three tiers of weather mouldings on the west side of the Tower, it would seem that the first roof was of a slight pitch, the second high and steep, when three windows of corresponding date were added on each side of the nave above the ancient windows; and subsequently a third roof, more depressed, was added. In the old views of the church, the dills of these three windows are plainly marked.

Mr. Bloxam gives a description to this effect:—In the west wall is a semicircular-headed window, the arch springing from a plain, square-edged impost of two members, one projecting over the other. The east and west arches of the tower are semicircular and of bricks like the jambs, which are 3 feet 6 inches thick, except a few courses of stones below the impost and the key-stone. The imposts are rudely moulded. The arch of the west wall is recessed. The windows in the tower are semicircular-headed, with straight jambs, without any splay; there are small circular windows of Roman brick, splayed without and within.

The church is cruciform, but without aisles, consisting of a nave 72 by 27 feet; a tower at the crossing, 28 feet square; a transept, 72 by 20 feet; and choir, 22 by 18 feet; the whole internal length being 121 feet. On either side of the nave are the remains of two clerestory windows of great size: between those on the south side was a door, circular headed, with double arches of tile: underneath the west window, on the north side, was a more pointed door, beneath an acute-angled pediment, the weather moulding of a porch, the principal entrance. Two round windows were in the gable of the north transept: one *was* in that of the south wing; in the east and west walls of the former was a trefoiled lancet window. In the west wall of the south transept was a round-headed window, and in the north-west angle is a late Tudor window of three lights. In the south wall of the nave appear two huge indents, which in some old prints are erroneously fashioned into windows, but are evidently the effect of a design to destroy the entire edifice by gunpowder. The choir was lighted by two lancet windows, separated by a shaft with a simple capital on either side; the east window, perhaps a triplet, was 13 feet 8 inches in width, and the splay is 2 feet 3 inches; on the south side remain a bracket piscina and sedilia, Early English. In the south-east angle were found two bodies, buried upright, like the De Claphams at Bolton. A covered porch unites the nave to the Pharos. In the angles of the tower are graceful Early English shafts, and the springers and ribs of arches filled with a dog-tooth moulding. Two large round brick arches, strong and massive, with bonding courses of Roman tile, support the central tower on the east and west: those opening into the transepts are pointed. On the east face were two round windows; on the south two pairs of the same form; and on the north three, disposed in an inverted triangle. On every side was a round-headed window, opening below the roof into the church, and forming an internal lantern, above which were two stories, the uppermost lighted by two small windows, a pair on every face, and of pointed form, probably added when the second roof was added. A round-headed window is in the west wall of the nave. The choir arch is 12 feet wide; the transept arches, each, 17 feet; that of the nave, 15 feet. The octagonal tower, at the west end, was built by the Romans as a lighthouse, about A.D. 400, in imitation of Caligula's Pharos, at Boulogne. It has bricks of a bright red hue, with blue flinty grit in the centre, or of cream-colour and white. On the south side are some specimens 3 feet in length, highly glazed, and with chequered or straight channels. The other material employed is travertine, a tufa cut into blocks, measuring about 1 foot by 7 inches; the walls having seven courses of tophus, and then two tiers of tiles. There were originally two windows on the ground-floor, with a north-west entrance 6 feet wide. Some alterations were made by Bishop Gundulph, and in 1259 it was cased with flint by Richard De Grey, the Constable, and altered from an hexagonal shape, and battlemented. The foundations are laid in a bed of clay. Its interior is square, about 10 feet in diameter, while the walls are 10 feet in thickness. Externally it is 37 feet in length. Sir George Rooke, at the beginning of the last century, removed its peal of eight bells to Portsmouth, and the lead, for economy, was stripped off by the Board of Ordnance. On the north face are the arms (they pass current for those of King Lucius) of Erpingham, Constable, in the reign of Henry V. the date of some further repairs: Vert an inescutcheon between eight martlets, which have hitherto appeared as two bars—a canton. Rickman thus describes the tower:—"It is a rude, round below, and square inside; the walls about 12 feet thick. The upper apertures of the tower, which is octagon, are Decorated one-light windows." Dr. Stukely enters more into detail:—"The door is on the east side, about 6 feet wide, with an arch made of a course of Roman brick and stone, alternately, 14 feet high. All the stones are of narrow scantling: there are first, two courses of Roman brick, which is level with the bottom of the windows; then seven courses of hewn stone, which mount up to the top of the windows; then two courses of brick and of stone, alternately to the top. The inside was entirely filled up with a staircase: the height of what is left is 40 feet. I believe there were 20 feet more originally, and the whole number of windows on the sides was eight."

The restoration of this church is demanded by the necessities of the garrison of the castle. A commodious chapel has been built for the troops quartered on the Western Heights, and was opened during this summer; while the regiment in the Castle is marched to the Guildhall, upwards of a mile distant, at once an unseemly and inconvenient place of worship. Many a soldier sleeps under the tangled grass on the south side of the nave, and we are quite sure that officers and men would hail with pleasure and pride a return to their ancient and proper garrison church. When costly officers' quarters have been lately provided, and excellent and well-attended schools instituted for the men, how long shall the adjoining House of God lie desolate, and not present to the mariner nearing these shores a glorious landmark, on the most prominent of England's cliffs, to attest that the red cross upon her national flag is no empty symbol of the faith which has elevated her to her present greatness?

MACKENZIE WALCOTT, M.A.

MUSIC—DRURY-LANE.

MISS PYNE and Mr. Harrison have commenced their second season with such vigour and success, as to give renewed hopes to those who desire to see an English opera house permanently established. On the opening night, *The Rose of Castille* was admirably well done, the cast being the same, with one exception, as when it was first produced, and all having gained increased power of expression with more complete knowledge of the music. The dresses are good, and the scenery sufficient. Flotow's *Martha* is to be produced forthwith, and is not an unwise selection. It does not seem absolutely necessary that *every* opera brought out should be by an English composer, but this should be the case for the most part; and Mr. Harrison, encouraged by the success of his first commission, should seek to give English composers the opportunity, which has long been denied them, of bringing their works before the public. In deciding on such works, let him look as well to the story as to the music; and, having carefully chosen, let him, by vigorous rehearsals and artistic mounting, including correct as well as effective scenery, give it that completeness to which the public of to-day are entitled, and a commensurate success will be certain.

EDINBURGH.

THE governors of Watson's Hospital (designed many years since by one of the brothers Adam, who designed the Edinburgh College, and Register House) having resolved to expend 10,000*l.* on additions to the Hospital, instructed their architect, Mr. John Lessels, Heriot-row, to prepare plans, which were at once adopted. The additions, which are now so far advanced as to admit of inspection, consist, says the *Scotsman*, chiefly of two wings added to the original building, and extend southwards. The east wing is devoted entirely to educational purposes. The ground-floor contains two class-rooms, an in-door play-room, and a workshop for the boys. On the first floor there are one larger class-room and a smaller which, though separated by folding-doors, can be thrown into one, and the library and book-closets. The second floor comprises two reading-rooms, drawing class-room, clothes-room, and cleaning-room. Of the class-rooms in the old house only one has been retained, and it has been enlarged and improved. Two of the others form corridors connecting the new and old portions, and the fourth is converted into a sleeping-ward. The west wing is occupied by the house-governor's apartments; a chapel, communicating directly with the governor's house; and a large store-room over it, with some additions to the kitchen offices. Considerable difficulty was experienced in connecting the old and new buildings, owing to the want of height between the floors, which did not admit of giving sufficient elevation to the ceilings of the class-rooms; but the architect got over this obstacle, by lowering the ground one foot at the base of the old house, and taking advantage of the fall of the ground to the south, by which two feet and a half more were obtained; thus giving three feet and a half to the elevation of the lower class-rooms, and also improving the external appearance of the old house.

The other additions consist of an entrance lodge at Lauriston, which is henceforth to be the principal entrance. Attention has been paid to the warming and ventilating of both the old and the

new buildings. This has been provided for by a combined system of warm-water pipes and heated air led along the corridors and into each of the class-rooms, with outlets in all the staircases and corridors. The mason work has been executed by Messrs. Paterson and Son; the carpenter and joiner work by Mr. John Swan, of the Edinburgh Saw-mills; and the plaster work by Mr. James Annan,—all under the superintendence of Mr. John Annandale, clerk of the works.

The new Baptist Church, Dublin-street, built from designs prepared by Messrs. Peddie and Kinnear, was opened a few weeks ago for public worship. The style is Geometrical. The building is entered by a corridor, leading from the porch in Dublin-street, and lighted by a traceried window in the gallery stairs at the east end. The entrance-door to the body of the church is placed opposite the pulpit, which occupies the north extremity of the building, under a large rose or "wheel" window filled with stained glass. On passing through this door, a view is obtained of the whole interior. The plan of the edifice is seen to be a cross formed by a nave or main body running north and south (parallel with Dublin-street), intersected by two transepts or cross divisions, extending beyond the sides of the nave to the east and west. The nave and transepts terminate in gables pierced by windows filled with tracery of varied design. On each side of the nave, at the intersection of the transepts, rises a moulded iron column, which serves the double purpose of supporting the centre of the gallery occupying the transept on each side, and of carrying the arched timbers of the nave and transept roofs, which here unite. These iron columns have capitals enriched with ivy-leaves, in high relief, which, together with the label terminations of the windows and bosses in the corridor-roof, have apparently been studied from natural foliage. The main roof timbers span the nave and transepts with pointed arches. Between the small timbers, the slate boarding is plastered. The timber fittings are stained, of a brown colour, and varnished.

BARRACKS AND HEALTH IN INDIA.

If any confirmation were needed of the truth of the observations we made some time ago as to the condition of barracks in India, and for which, as mentioned last week, we had been reproved by a Calcutta journal, it would be found in the report recently made to the Court of Directors by Mr. J. R. Martin. The report begins,—

"1. It is stated by Colonel Sir Alexander Tulloch, as the result of investigations in the War-office, made by desire of Mr. Sidney Herbert, that among British officers and soldiers of the Queen's and Company's armies serving in the East Indies, there occurred, from 1815 to 1855 inclusive, a total mortality, exclusive of casualties, of about 100,000 men, 'the greater portion of whose lives might have been saved had better localities been selected for military occupation in that country.'

2. Dr. Burke, late Inspector-General of Hospitals in Bengal, has stated that in the station of Secunderabad alone, during thirty years of its occupancy by British soldiers, the cost to the State on account of loss of life amounted to 150,000*l.* estimating each soldier as worth 100*l.* But, estimating the loss of life mentioned by Sir A. Tulloch at the same valuation of 100*l.* each man, we arrive at a loss in money of 10,000,000*l.* sterling.

3. Then there has been enormous waste of the public funds on account of barracks and hospitals placed in stations so unhealthy that they were subsequently abandoned. The buildings for the European troops at Berhampore, Bengal, abandoned since 1835 on account of its unhealthiness, are stated by the finance authorities of Calcutta to have cost since 1757 nearly 17,000,000*l.* sterling. Tennant declares that, up to this time, the sums expended by the East India Company for the accommodation of their European troops, 'if laid out at the compound interest of the country, would, at a determinate period not very remote, have equalled the national debt.'"

The report goes on to show that the Irish sufferers from typhus during the famine who were massed in workhouses and hospitals perished in enormous numbers, whereas those who were thrown along the roads and under the hedges recovered in goodly proportions: of so much more avail is pure air towards the restoration of health than a fine building. The thorough ventilation through the openings and crevices of huts supplies the sick with what they do not obtain in our ill-constructed barracks and hospitals—namely, pure air.

The report also bears out what we emphatically urged at the commencement of the revolt in India, the want of a sanitary staff in that country:—

"Lastly," says Mr. Martin, "let there be appointed for the sanitary duties of the army, at each of the Indian Presidencies, a medical officer of health—an officer of scientific attainments and of rank, who shall be attached to the quartermaster-general's department: we shall thus add to the department of military topography that of medical topography. The medical officer of health should preserve in his office, for the use of the scientific persons concerned, plans and models of the best barracks and hospitals which may be from time to time approved by the military powers of Europe, in order that the most recent improvements may be rendered available wherever buildings of the nature indicated may be found necessary."

We care not in what shape the authority be deputed, so that it exist, and do its duty. We may now hope to hear no more denials of the truth of our assertions as to the existing ignorance of sanitary requirements in India, and the bad condition of the barracks there. Let all unite to obtain improvements in these respects.

DRINKING-FOUNTAINS.

The fountain movement is evidently spreading throughout the country; and it is to be hoped the Londoners will in time enjoy a share in it. We are glad to observe that our suggestion that the temperance societies ought to agitate for the extension of street fountains, taps, and pumps, as one of the most potent aids towards the excellent end they have in view, is already taking effect. At a temperance demonstration in the City, on Tuesday, the chairman of the City of London Temperance Association, Mr. Benjamin Scott, the City Chamberlain, in an address to the meeting, said, "There is one point of importance;—that many of our humbler citizens complain that they cannot find a wholesome substitute for beer or other drink; and I think the suggestion of having water-fountains in London is a good one. Now I know the Commissioners of Sewers; and I think a memorial to them from the Temperance Association, on that subject, would be of good service. I one day saw in Cornhill eight or ten people waiting at the pump there to drink; and it struck me that fountains or pumps in the streets would save many men from drunkenness. I should be glad to contribute towards such a movement."

When a useful suggestion has been laid before the public in the *Builder*, it always happens somehow, that it *shortly afterwards* takes a new start, as quite a new suggestion, by somebody else; but that is a matter of small moment to us so long as the suggestion as had its effect; and we have far too often noted this peculiar association in the "constant sequence" of cause and effect to be at all surprised or mortified: the taught do not often either acknowledge or glorify the teacher, and it is sufficient recompense to watch our goodly progeny as they "walk alone," unmindful of our erewhile helping hand.

A still more practical and promising step has been taken by the Banbury Temperance Society towards the adoption of the street fountain movement as a useful subject of temperance agitation. A deputation of this society waited last week on the Banbury Board of Health, and asked to be allowed to supply the town with two or three public drinking-fountains. They proposed both to supply the fountains and to put them up, the Board to fix upon the sites, take charge of them after they were erected, and go to the expense of supplying the water. A great number of persons, they said, came into Banbury, especially on market days, to whom these public fountains would be acceptable; and hence the Temperance Society was anxious to provide them, and had raised a contribution for that purpose amongst its members. If the Board thought well to appoint a committee on the subject, the committee of the Temperance Society would be glad to show them the plans and designs of the fountains. In reply, the chairman said the Board was much obliged to the Temperance Society for making so liberal an offer. He believed the public would not object to incurring so small an expense. The deputation then withdrew, and it was resolved to refer the matter to the committee already appointed to arrange similar conveniences for quadrupeds, two other members being added "as representatives of the biped interest," adds the Banbury reporter.

It is gratifying to note that horses, cattle, and dogs, as we have long and often suggested, are thus not being forgotten: where drinking-fountains for human beings are erected in the streets of a town, there can be no difficulty in devoting the waste to animals, who frequently suffer sadly from want of such accommodation. This is especially the case in the vast extent of the metropolis; and it is painful to witness the poor creatures drinking out of every filthy puddle they come across, even these being not often available.

Several items of farther progress require to be noted down this week.

At Preston a drinking-fountain is being erected in the market-place.

The design for the fountain to be erected in Ann-street, Birmingham, with the surplus of the decoration fund for the queen's late visit, has been decided on. Designs were invited from three architects, and that furnished by Mr. E. J. Payne, of Bennett's-hill, was finally selected. The site proposed is the boundary-wall of Christ Churchyard, at the sweep of the street near New-street. The fountain, according to the local *Herald*, will be sculptured from a block of Ancaster stone, of a cream-white colour. A niche, sunk in the stone and wrought in imitation of stalactite rock, and of rushes and water-weeds, forms a protective receptacle for the basin—a double shell opened, cut in Aubigny stone; the water issuing from the volutes of the upper shell. The niche is girt with a laurel-wreath and enriched mouldings, and is surmounted by an angel. Below the fountain, and at a level of merely a few inches from the pavement, is to be provided a second basin, also sunk in a niche, through which the waste water from the upper basin is allowed to pass before flowing into the drain. This will afford refreshment to dogs, and, we presume, to other animals as well. The fountain will be set back in a recess in the wall, and will be executed in *alto relievo*.

The Liecester Council have unanimously passed a motion approving of fountains, and referring the subject to their Highway and Sewerage Committee. It is proposed, in the first place, to erect three fountains,—one at the Cross in Belgrave-gate, another in Welford-place, and the third at the junction of Sanvey-gate and Northgate-street, and each to have a waste trough for animals.

EFFECT OF FINE WEATHER ON PUBLIC MONUMENTS,

AND ON LABOUR IN PARIS.

During the month of September, in Paris, it has been delightful to observe the influence that extraordinary fine summer weather has in heightening the beauty of a city's public monuments and works of art. They have appeared to great advantage under cloudless skies, and a sun shining with the most intense brilliancy, exciting in the hearts of thousands the most enthusiastic impressions. The French, accustomed to splendid sights and pompous processions, stopped on their way to business or pleasure, and directed their eyes upwards and around them to gaze on their sun-sparkling city with some astonishment. The more distinguished and beautiful lines and members of their national edifices—the theatre for fine building and groups of statuary in the *Place de la Concorde*—of which the Parisians have reason to be proud, were seen glistening like burnished steel, exhibiting a degree of splendour far surpassing the attempts they have made in the way of their nocturnal and festal illuminations. The reflection of the sun was so powerful that even in the shady sides of buildings and other objects, the details were discernible; parts too beautiful to be concealed, revealed themselves; and the veins of marble were resplendent. The polished surfaces of the productions of the studio and *atelier*, the gilded railings, the *trottoirs bitumés*, the fresh-jointed masonry, the sculpture of buildings recently renovated, the richly-carved ridge ornaments to the roofs of the pavilions of palaces, the flooring to the *Pont-des-Arts*, were more like the well-kept and spotless interior of a duke's *salon*, than external work which is exposed constantly to dust, and daily wear and tear. We have often admired and been amused at the great pains taken in preserving the monuments of Paris clean and free from dirt, or moisture, that might corrode them, and confess that it needs a delicate and careful hand to scrape and to polish the fine and elaborate parts of them. However, this attention to them from Government acts beneficially on the mind of the people; and there is no occasion for the police to prohibit the bill-stickers pasting placards on anything else than a blank ugly wall. The French cherish their monuments, and the names of those who have created objects for them to admire. The out-of-door attractions of art, which are very numerous, are appreciated and loved by the Parisians, especially when the climate which favours their appearance is in its perfection, and when holiday-making and games in the environs of the city are the programme of every day. The weather, with an azure sky without a cloud the whole of the day, and so studded with stars during the night as it has been this month, is most propitious for the labours, almost proverbial, which are making Paris more and more eminent as one of the greatest centres of industry in the civilized world. The present reparations and alterations of the Tuileries, and the improvements making in the gardens; the light and graceful bridge, admitting daylight and opening a pleasing vista of the terraces and trees, which were formerly intercepted by a dead wall; the erection of two more bridges on the Seine, excite the interest of every one as he strolls on the quays, from which he obtains a good view of works in constant operation, and calculated for the use and ornament of the

capital, at the same time promoting the welfare and interests of the population. These constructions have, and will yet have for a long time, the effect of employing hundreds of active and careful workmen night and day; and the energy and spirit they produce among a class and craft who are aptly called "the blood of the nation," is a gratifying sight alike to both native and foreigner.

ART-EXHIBITION IN CLONMEL.

THE moveable collection of specimens from the Government Department of Art having been lent to this town, an effort was made to provide suitably for them, and to produce a creditable exhibition, of which, so far as we can learn, and making due allowance for limited resources, we believe we may chronicle success. To the committee of the local Mechanics' Institute is mainly due the credit of this event, both as to its origin and accomplishment; but several gentlemen of rank and position, voluntarily came forward and tendered their assistance, both by valuable contributions and otherwise. At the head of the staircase is a full-length portrait of Lord Gough, by a local artist, Mr. James Howard. The effect of the apartment is pleasing: a splendid *jet d'eau* occupies the centre; and the glass-cases, stands, &c. are judiciously distributed. Several of the townsmen have contributed specimens of local industry; and some beautiful and valuable pictures have been lent for the occasion by Lord Gough, Messrs. Bianconi, Bagwell, White, Grubb, &c. The surplus profits (if any) are to be handed over for the benefit of the Clonmel School of Design. A portion of the Court-house is devoted to this exhibition, and several improvements have been effected; the entire arrangements being under the management of Mr. Worsop. The value of the collection of pictures is estimated at 8,000*l.* Lieutenant-colonel Phipps, K.C.B. took the chair on the occasion of the opening, which was very brilliantly attended. In this age of "excursions," it would not be inadvisable to take an influx of visitors to the town by cheap trips, though the season is somewhat advanced.

BIRMINGHAM.

PURIFICATION OF THE TAME, &c.

AT the town council meeting last week a report of the public works committee on the sewerage of the borough and the filtration experiment was read by the chairman. The committee reported that they had now completed the experiment of filtering a portion of the sewage of the borough, at the outlet at Saltley, and the process had been in operation several weeks. During this period the works had been carefully watched by each member of your committee, and several scientific individuals had also attended to inspect them. The committee, being satisfied with the results, had no hesitation in recommending the council forthwith to authorize them so to extend the works as to enable them to purify, for a considerable period yet to come, the sewage of the borough; and they estimated that this object might be attained by an expenditure of 4,200*l.* The sewage, and also the filtered water, had been subjected by Mr. Adderley to the examination of Mr. Lindsey Blyth, the analytical chemist to the General Board of Health, and they append to their report the analyses of that gentleman in support of their recommendation to the council. The committee also reported that their attention had been continually directed to the present condition of the sewerage of the borough, and to the necessity which has so long existed for completing it; and they were of opinion that the work could not be longer delayed. They had obtained an estimate of the cost of the works, which amounted to 75,000*l.* This sum, it was believed, would complete the main and branch sewers of the building area of the borough. A large extent of kerbing and guttering would be necessarily required in the streets traversed by the new sewers when constructed, and in many streets already sewered: an estimate of the cost of this work amounted to 50,000*l.*

The report having been received, the chairman moved that the committee be authorized to carry out the extension of the works at Saltley, with power to certify for payment of a sum not exceeding 4,200*l.* For his own part, he remarked, he might say that the result of the experiment was of a highly satisfactory character. It would be eminently useful in purifying the sewage water from offensive matter; and the nuisance complained of by Mr. Adderley, with reference to the Tame, would be so far mitigated as to remove that gentleman's objections. At the same time he must remind the council that the injunction of the Court of Chancery was hanging over them, and it was absolutely necessary that they should do something, and the general opinion of scientific and other persons appeared to be decidedly in favour of filtering the sewage matter.

In course of the discussion which followed it was stated that the quality of the sewage matter compared with that produced in other towns was richer, and that in a very short period it would return the outlay and the working expenses connected with it. The sewerage yielded some 10,000,000 of gallons of liquid matter per day, and about 150 grains of solid matter were obtainable from each gallon, or about 4lbs. from every ton. The yield of solid matter per day would, according to the quantity of sewage water conducted into the works, average from 76 to 78 tons, which, sold at even a moderate price, would realize 50*l.* or 60*l.* a-week, which would be more than amply sufficient to enable the works to pay their way. The proposition was carried unanimously, and the report approved of by a large majority.

At the same council meeting, a portion of the Lunatic Asylum Committee's Report with respect to the proposed enlargement of the Borough Lunatic Asylum was read for further consideration. The committee called attention to the want of room in the asylum. The house was built for 300 patients, and it was now recommended that an extension should be effected by adding a block of 40 feet by 25 feet to each of the six wings, with alterations near the laundry. That would give accommodation for 200 more patients, making the total number 500. The estimated cost of the alterations, with furniture, fittings, &c. was 10,000*l.* The committee now asked for authority to carry out the projected enlargement.

After considerable discussion the report was approved of, and a resolution to give the authority asked for almost unanimously carried. The finance committee were authorized to negotiate for a loan of 10,000*l.* for the purpose.

IRELAND.

THE Wesleyan Congregation and Society of Portadown, finding that the premises occupied by the body were unsuitable to their wants, at first determined on effecting extensive improvements and additions thereto; but ascertaining that the cost would be too high, considering the additional accommodation obtainable, it was subsequently decided not to proceed, but to dispose of the existing concern, and take a site close at hand for the erection of a new building. Subscriptions were promised to the extent of 2,048*l.* and plans obtained from Mr. Boyd, architect, of Belfast, for the necessary works, which comprise a chapel 60 feet by 40 feet in the clear, and 31 feet high, having two vestries, a large vestibule, a gallery (carved and ornamented in front) surrounding interior, an organ gallery, and a panelled and enriched ceiling; also a large school-room, 60 feet by 30 feet, divided in the centre by a movable partition, and forming two apartments 30 feet square for boys and girls respectively, with class-rooms, &c. off same; and a manse, containing dining-room, drawing-room, library, and five bedrooms, with stable, coach-house, &c. at the rear. The chapel will be heated with hot water. Exteriorly the end of chapel building towards Thomas-street presents a tetrastyle Corinthian portico, surmounted by an entablature with cornice and pediment, and plain blocking over, returned a short distance on the flanks over two Corinthian antæ. The elevations of the schools and manse are of plainer character. The chapel is lighted by eight pairs of windows, the lower being short, with segmental heads, and the upper long and narrow, with semicircular ditto. The excavations are being proceeded with, and the works are intended to be executed in whin stone, with a considerable quantity of cut stone. Estimated cost, 4,000*l.* Messrs. Brown and Ross, of Belfast, are the contractors.

In the same town a new Presbyterian Church has been recently opened. It is capable of seating 600 on the ground-floor, with a place for a gallery for 200 or 300 more to be hereafter erected. The old house is being made into a school-house. Mr. W. J. Barre, of Newry, is the architect; Mr. Davidson, of Lurgan, the builder.

A new male orphanage is proposed to be built at Glasnevin, near Dublin, by the Society of St. Vincent de Paul, and plans have been substituted for same in a limited competition by Messrs. J. S. Butler, P. Byrne, and C. Geoghegan, architects. The estimated cost of the intended construction is 4,000*l.*

Ten substantial school-houses are being erected in the parish of Ardcarna, Boyle.

The line of railway recently constructed from Ballinahinch to Belfast, is now open for traffic.

A new organ, by Messrs. Hill, of Euston-road, London, has been erected in the Roman Catholic Cathedral of Waterford.

The Dundalk and Enniskillen Railway extension to Lisbellaw, has passed the Government inspector, and is opened for traffic.

Two stained glass windows have been manufactured by Messrs. Casey, of Dublin, for the Roman Catholic Church of St. Peter, Drogheda. They are 14 feet 6 inches in length, and 4 feet 6 inches in width. The same firm is also preparing new windows for the churches of St. Lawrence O'Toole Dublin, Turbotstown, and Killeshandra; as also for the Convent at Kells.

A new Convent of Mercy, schools, and orphanage, have been erected in Belfast, from designs by Mr. J. J. McCarthy, architect. They are situated near the Crumlin-road; and the gaol wall forms one of the boundaries of the Convent grounds. The Convent faces Donegal-street. The materials are red brick, with sandstone, and white brick dressings.

THE BRUEN TESTIMONIAL CHURCH, CARLOW.

THE *Carlow Sentinel*, exhibiting, first, a kindly appreciation of a recent notice of the town in our pages (591), appeals to us, in justice to the late Col. Bruen, to give the following history of the Bruen testimonial:—

"After the defeat of the late Mr. O'Connell at the memorable election of 1841, a sum of about 1,800*l.* was collected by many of the nobility and gentry of Ireland, to present the colonel with a service of plate in commemoration of the victory he had so fearlessly won. With the disinterested feeling which he exhibited in every act of his life, whether in a public or private capacity, he declined the intended honour, but requested the subscribers to appropriate it to the erection of a free church for the accommodation of the parishioners—the parochial church not being sufficiently extensive to accommodate all. He commenced the work, which he did not survive to see completed; but he bequeathed the task to a worthy successor, who, following in his parent's footsteps, and possessing much of his energy and zeal, accomplished that task at an expense of about 10,000*l.* above the sum originally subscribed."

CHIMNEYS.

MR. JOHN BILLING, of Abingdon-street, Westminster, has patented a throat and door for chimneys and flues. The patentee constructs a double conical throat or frame of iron, or pottery, or enamelled iron, or other suitable material, which he fixes or builds into the chimney, above or upon the fireplace. A door or valve is made to fit into this throat, and is connected to it by a joint or hinge, and is provided with a rod or handle by which it can be raised or lowered. He makes this door and its frame curved, or level, and elliptical, or longer in one direction than the other, and he makes the joint in such manner that the door may be taken out and replaced by another, if required. The edges of the door and its seat may be bevelled, or they may be of a spherical or ellipsoidal form, so as to insure a sufficiently close fit. Any slight interstice between them will soon be filled by soot falling upon it, as the form of the frame directs the soot to it. These doors are intended to be shut when the fireplace is out of use, and to be open, either to their full extent or partially, when the fire-place is in use. For this purpose they may be raised and lowered by a rod with holes, or loops, or notches, which catch upon a fixed pin, or by other suitable means. These throats and doors may also be applied to flues used for ventilation.

Mr. John Billing has directed his attention to the cure and prevention of smoky chimneys for some time past, and has applied his arrangements at many of the Government offices, and in other buildings of importance, with very good effect, as we are informed.

THE GRECIANS OF CHRIST CHURCH.

SOME discussion has for a time been going on respecting an alleged decline in the vital powers of the "Grecians," or head boys, of the Blue Coat School. Some of the Grecians and other members of this establishment have come forward in vindication of their own health. Without deciding as to the fact, we would remark, that in a sanitary point of view the Grecians are certainly not so well cared for as the other scholars. Instead of their having the advantage of the space provided in each dormitory, they are lodged in curious-looking closets, placed about halfway between the floor and ceiling, in parts of each sleeping apartment. These places of dignity are reached by rather primitive staircases. From this elevated position the Grecians can look with the eye of

authority upon those below, and are also able to pursue their studies without interruption. This honour, however, is not without its alloy, for these little boxes are decidedly too small for the purposes of health. They must also to a considerable extent depend for their ventilation, if it can be so called, on the air of the rooms, which, when these are occupied, must be more vitiated than is the case below. In the dormitory provided for the houseless, near Field-lane, those sleeping on the floor (although very closely crowded), passed through several seasons, without any case of fever occurring. At a particular time owing to the large number who required admission, some were lodged in a gallery, placed in a similar position to the closets of the Grecians, and from this so many cases of fever occurred, that it was found necessary to put a stop to the practice of sleeping in the gallery. Our suggestion, therefore, as to the cause of the difference in the health of the Grecians and the other boys, if it exist, is founded on a cognate fact.

PROVINCIAL NEWS.

Sudbury.—An exhibition of works of art and manufactures has been opened at the Corn Exchange in this town for the benefit of the local British Schools, and has been well supplied. It may be as well to add that this town is a disenfranchised borough, containing but 6,000 inhabitants. A correspondent says,—"When a town thus situated shows such public spirit, ought not its privileges to be restored, as an example for other towns?"

Colchester.—Flag stones are gradually supplying the place of the present small stones in the side-walks of the minor streets of this town. Trinity-street has been thus treated throughout, and a considerable portion of East Stockwell-street.

Leicester.—At a council meeting last week the gaol committee reported that they had received thirty-four tenders for the execution of the gaol enlargement works, and that they recommended acceptance of the following separate tenders:—

For the New Buildings:—

	£	s.	d.
Osborne, bricklayer's and slater's works	2,459	10	0
Ditto, carpenter's	230	0	0
Richards, iron work	387	0	0
Lindley and Firn, stonework	604	0	0
H. Smith, painter's	15	10	0
Alterations, exclusive of Brickwork and Carpenter's Work:—			
Richards, ironwork	29	12	0
McCracken, stonework	67	8	0
H. Smith, painter's	2	10	0
For new Buildings and Alterations:—			
Norman, plumber and glazier Haden, of Trowbridge, heating apparatus for buildings and cells, at 4*l.* per cell (say)	207	12	6
	620	0	0
	4,623	2	6

The report was adopted. At the same meeting the sewage committee reported with regret that they had received notice from the Patent Solid Sewage Manure Company (limited) of their intention to relinquish the works at the outfall into the hands of the town authorities. The company had at the same time intimated their readiness to enter into an arrangement for the continuation of the contract for three years, by the payment of an annual sum towards the cost of lifting and disinfecting the sewage. The company were under the obligation of surrendering to the local board all the machinery and other works without receiving compensation or equivalent. Although there could be no doubt of the efficacy of the system of deodorising adopted by the company, considered in a sanitary point of view, it was to be regretted that hitherto it had been a failure as a commercial undertaking, the manure not having found a market at anything like a remunerative price, and that the company had sacrificed a large amount of capital in the undertaking. It was stated in the discussion on the report that between 20,000*l.* and 30,000*l.* had been expended on the company's works. Time was taken to consider the subject.

Cardiff.—Messrs. James and Price are pulling down an old house in St. Mary-street, it being intended to erect on the site a public building for the use of the Freemasons, and also an arcade, the thoroughfare of which will lead from St. Mary-street into the Hayes, thus forming a direct line to Bute-street. The improvement will cost about 8,000*l.*

Liverpool.—The subject of erecting new public offices more adapted than the present in Cornwallis-street and the Town-hall for the extended requirements of the borough, promises soon, says the *Courier*, to be brought prominently before the municipal authorities. The Parliamentary subcommittee of the health committee of the town council have agreed that Mr. Newland, the borough engineer, be instructed to prepare two plans—one showing the arrangement of the offices entire, and the other such an amount of accommodation as would be required for only a portion of the offices. An opinion has been expressed by the town-clerk that, as a matter of economy, the concentration of the offices in one building was desirable; besides which, the public business would be much more satisfactorily and efficiently performed.

Bolton.—It is in contemplation to erect a Concert Hall in Bolton, on the site of the old theatre, in Mawdesley-street, to accommodate an audience of 1,200 persons. The plans have been drawn by Mr. Holt, architect, and the cost is estimated at 2,100*l.*——The first stone of the Bolton workhouse, on the Fishpool estate, Farnworth, was laid last week.

Rochdale.—The foundation-stone of new Wesleyan Schools has been laid at Rochdale. The new building is to be a plain brick structure, to correspond in style with the chapel. The cost is expected not to exceed 1,500*l.*

Ormskirk and Southport.—The commissioners of Southport have at length agreed upon adopting a system of sewering to low water. A resolution has been adopted, abandoning and ordering the removal of the sewer at present existing on the sea-shore, from the bridge at the end of Nevill-street towards low water, a distance of 320 yards, and authorising the construction of the new sewer. The project will cost about 2,000*l.*

Halifax.—The corporation are now to commence the erection of the much-talked of baths. The design has been produced by Mr. G. W. Stevenson, the borough engineer. It is in the Classico-Italian style, and consists of an elevation facing Park-road of a superintendent's house of two stories, having on each side wings of one story. The façade is broken by pilasters with plainly-moulded capitals, and surmounted by a moulded cornice. At the entrance, in the centre, there are four columns with Ionic capitals. The windows are all square, with moulding on every side. The first story windows in the superintendent's house (in the centre) are circular-headed. The elevation into King-cross-lane is plain, being relieved by pilasters; the same being the case in the elevation facing into the park. The cost of the building, it is estimated, will be 3,000*l.* and of the engineering work and general fitting up 1,500*l.* making a total cost of 4,500*l.*

Clevedon.—The new schools at Clevedon, built by Sir A. H. Elton, M.P. and others, are just finished. Messrs. Pope and Bindon were the architects, and Mr. Hartree the contractor.

Worksop.—It is intended to proceed soon with the drainage works of this town.

Whitby.—The foundation-stone of a new Masonic Hall, to be erected on the West Cliff, Whitby, has been laid by the Earl of Zetland, Grand Master of Masons.

Doncaster.—The parish church bells have reached Doncaster, and been safely, it is said, raised to the belfry, under the superintendence of Mr. Denison, Q.C. Though not formally tried, they are said to promise well.

Books Received.

The Illustrated Historical and Picturesque Guide to Swanage and the Isle of Purbeck; with a Description of the Coast from Bournemouth Bay to White Nore. By PHILIP BRANNON, Architect. Poole: R. Sydenham. London: Longman and Co.

THIS is the third of a series of "Guides" to a very picturesque district of our sea coast, and the first and only guide-book to the Isle of Purbeck. To our professional readers, the most interesting feature of this "isle" will doubtless be its (not sufficiently) well-known quarries. Of these Mr. Brannon gives full and useful particulars, from which we condense the following:—

In the Isle of Purbeck, building-stones exist in great variety, so as to be adapted to almost any description of architectural and engineering purposes. The true Purbecks, or thin beds of shelly limestone, alternating with clays and sands, formerly considered as wealden, now as upper oolite, furnish the great staple of the stone exports from this district. They consist of an immense number of beds from a quarter of an inch to four feet in thickness, mostly very hard and close grained, and separated from each other chiefly by beds of clay, varied with sandy and loamy, gravelly or marly earth. A very great proportion of the stone beds are useless, either on account of their excessive hardness, their friability, or softness. The upper beds are the well-known and beautiful Purbeck marble: beneath this, the thick beds of the harder kinds are adapted to sea walls, fortifications, and other solid work, where minute cutting and rubbing are not required. The more easily worked, or "freestone beds," are used for all kinds of architectural dressings, external and internal stone fittings, sunk and rounded work, such as sinks, troughs, granary and rick leg and cap stones, and in fact all those purposes where easy and clean cutting in work, and subsequent durability, are essential. The thin beds are employed for paving, which, when well selected, is the best in the kingdom; and the very thin layers of tough limestone, or the tough fissile beds, are split into suitable thicknesses as tilestones for roofing.

The quarries are all worked underground, and entered by oblique shafts, from 20 feet to 100 feet deep: a slope for dragging up the stone, and steps at the side for the workmen, with a rude capstan worked by a horse at the top, and sheds adjoining, in which to carry on dressing the stone, constitute the whole arrangements in these primitive works. There are in the Isle of Purbeck about 100 of these quarries, more than half being in the immediate neighbourhood of Swanage.

The mode of shipping the stone from Swanage is even more primitive than those employed for bringing it to the surface. There is no pier for this purpose, although its construction would be a source of great profit even in the present state of the trade.

Prices at the quarries and at the bankers':—Purbeck marble, block, per foot cube, 2s. to 4s.; paving stones, per foot super. 3½d. to 3½d. or 27s. per 100 square feet, or free on board at 4d. per foot; landings, tombstones, and other large slabs, per foot super. 9d. to 1s. 1d.; steps, per foot, 4d. to 6½d.; curb, according to thickness, per foot run, 3d. to 4d.; rough block, 6s. per ton, or 8d. per foot cube; scappled block, per foot cube, 1s.; tooled ashlar, per foot cube, 1s.; window-sills, tooled copings, strings, and other gauged stones, foot run according to thickness and mould, 11d. to 1s. 6d.; ditto, rubbed, per foot run, 1s. 3d. to 2s.; long steps, per foot, 10d. to 1s. 2d.; flatners, per ton, 9s.; ditto, squared and faced, 15s.; rough horse pitchers, per ton, 45 feet, 6s. to 8s.; dressed, for pitching streets, 9s. to 13s.; rough wall stone, per load, 1s.; per load or per ton, 1s. 8d. to 2s. 10d.; dressed ditto, 6s.; tile stones, per load, to cover 100 square feet of roof, 1*l.*; ditto, dressed at the bankers', 28s. to 30s.; gutter, per foot run, 5d.; channel, ditto, 4½d.; gate-posts, each, 2s. to 4s. 6d.; leg and cap rick and granary stones, according to size, finish, and whether round or square, per pair, from 3s. to 5s. The shipments have latterly amounted to only about 20,000 tons annually, whilst with proper arrangements four times that amount would be easily disposed of in the market.

There are also cements and limestones of excellent quality in the Purbeck Portland beds, as also fire and pottery clays, iron ores, &c.

Miscellanea.

EXHIBITION OF WORKS OF MODERN ARTISTS AT MANCHESTER ROYAL INSTITUTION. — The annual exhibition at this Institution has been opened. According to the *Courier* it exceeds that of last year both in numbers and in the interest and value of the pictures. The statuary is placed in the vestibule. There are 600 works of art from chisel and pencil exhibited. The paintings and water-colours fill three rooms and the staircases. The Manchester artists exhibit in great force, especially Messrs. Duval, Gibson, Whaite, Crozier. Hayes, Mitchell, Brodie, Royle, Rothwell, &c. Mr. J. Hammersley was to give a lecture, descriptive and critical, at the exhibition.

THE MAHOGANY TRADE.—A crash, it is said, has taken place amongst the firms in the Honduras trade. After several stoppages for smaller amounts, the house of Hyde, Hodge, and Co. suspended payment, large assets appearing, but not capable of being immediately realized. The houses of Holme and Slater, and J. Carmichael and Co., of Liverpool, and that of M'Nair, Greenhow, and Co. of Manchester, have suspended, Carmichael and Co. showing liabilities to the extent of 250,000*l.* or 300,000*l.*; on which a dividend exceeding 10s. in the pound, it is said, cannot be expected. The result of these failures is to throw the Honduras trade for the present into two or three hands.

SEWAGE AND ITS VENTILATION.—Dr. Letheby, the City officer of health, has presented a long report to the Corporation on "Sewage, Sewage Gases, and the Ventilation of Sewers," which will have our attention in due course.

ACCIDENTS.—At the Adelphi Theatre, on the 19th inst. as one of the men employed in the rebuilding was wheeling a barrow of bricks along a narrow plank, he slipped, and fell a considerable depth; the heavy barrow and contents falling on his loins, breaking several ribs, and injuring his spine. He was taken insensible to Charing-cross Hospital. On another of the workmen several tons of bricks had fallen: he was also taken to Charing cross Hospital in a precarious state.——A bricklayer, at work on a scaffold, near Pimlico, had his attention called by some one below, and on turning round fell a considerable depth. He was conveyed to St. George's Hospital in a dangerous state.——A bricklayer's labourer was working on the 3rd instant, at some buildings in Abbey-gate, at Leicester, when he fell from a scaffold and injured his spine. He was conveyed to the Infirmary, where he died.——A joiner, who was engaged in constructing a gallery on some vacant ground in Woodhouse-lane, Leeds, near the New Connection Chapel, fell down head foremost and severely fractured his skull. He was at once taken to the Infirmary, but died there in a few hours.——Letters from Spain mention a distressing accident on the Santander Railway. The Directors were making a trial trip, when an embankment gave way, and about twenty persons were injured, and one of the engineers of the line was killed.

CATASTROPHE AT THE SURREY MUSIC HALL, SHEFFIELD.—On Monday evening a panic caused by the escape of gas led to a rush of the audience from the house, and on the staircase from the lower gallery five persons were, unhappily, killed, and many injured. The description given of the staircase is not very clear: we shall hope to have further information. The necessity for the warnings we have given for years in respect of stairs and approaches to public buildings must be evident to all.

OUR CROSSINGS.—These the several parishes can cause (under the Metropolis Local Management Act, sec. 118) to be kept clean, and they are specially empowered to pay crossing-sweepers. Supposing, however, this duty were performed once a day (by the way, if their contracts for cleansing the streets were carried out, even this would not be requisite), we should get rid of a system of solicitation and annoyance at a moment of distraction, when one's faculties ought to be engaged only in devising escape from the numerous vehicles that ply the streets. How this open begging system is countenanced by the police passes comprehension. Under cover of it, I believe many robberies are effected; and it is a nuisance which should be numbered with the things that were. I am very much inclined to try Justice Coleridge's view of the law as regards foot and horse passengers. His doctrine is, one may just as well call on the other to stop, as the other:—seriously, as the speed of steamers is regulated in the Pool, so ought that of cabs, carriages, and omnibuses to be on public roads.—VIATOR.

MR. HANVEY, CITY SURVEYOR, GLOUCESTER.—In a Gloucester paper which found its way to Penrith last week, says the *Carlisle Journal*, some severe strictures were made upon the claims of Mr. Hanvey (late engineer of the Penrith waterworks), which had been sent in to the Gloucester Board of Works, for extra services rendered to the said board as engineer of certain public works connected with the city of Gloucester. The case came before the Gloucester Board of Health on Monday last, and, after a brief discussion, it was carried, unanimously, that the sums for extra services and money out of pocket, amounting in all to 480*l.* be paid to Mr. Hanvey.

IRON CHURCHES.—SIR,—We are are glad to find attention is being directed in your journal to the subject of iron church building. As contractors for these structures, several of which we have lately erected, we admit that material improvements might and *can* be made if *price* were not so much an object. We are beaten by this at present. The clergy and those for whom we have erected churches, have hitherto cared less for the *outside* than the *inside*. As regards the latter, we are glad to say we have been able to give satisfaction; and as regards the former, and with a view to architectural improvement, we have appointed Mr. G. Adam Burn our architect: he is now busily engaged for us on a series of designs for iron churches, which, when complete, we shall have much pleasure in sending you.

TUPPER AND CO.

THE LATE MR. FIELD, ARCHITECT, MELBOURNE.—Not long ago we gave a view of a church in progress in Melbourne, under the direction of Mr. Field, architect, late of Worcester. We hear with regret that this gentleman dropped down dead in the street, at Melbourne, in the beginning of July last. Mr. Field was rapidly coming into notice in his adopted country as an able architect.

NEW CHURCH AT NEWINGTON-BUTTS, SURREY.—The Dean and Chapter of Canterbury Cathedral have given a site for a new church at Newington-butts, and an endowment of 150*l.* a year for the incumbent. The new church will cost 5,000*l.* and will contain 1,000 sittings, free.

INCRUSTATION OF IRON WATER-PIPES.—The supply of water at Whitehaven, which is brought from Ennerdale Lake, has become unexpectedly curtailed by the incrusting of the iron-pipes, through which only 500,000 gallons a day can now flow, instead of 1,000,000 gallons, which they were originally capable of delivering.

LIVERPOOL SOCIETY OF FINE ARTS.—The exhibition of the Liverpool Society of Fine Arts was opened on Saturday, the 11th inst. for the first time, under the presidency of the Earl of Sefton. The exhibition comprises 852 works of art, and differs from the Liverpool Academy in being managed by a council not entirely composed of artists. This Society was formed, it will be remembered, through a popular impulse in opposition to the doings of "The Liverpool Academy." Every subscriber is furnished with a card, on which, it is hoped, he will express his opinion as to the picture entitled to the prize which has been offered. Mr. J. Boult is the hon. secretary.

PRESERVATION OF STONE.—A practical illustration of Ransome's process for the preservation of stone is now before the public, at Bloomsbury Baptist Chapel, New Oxford-street, where the Caen stone of the principal front, towers, and flanks are under treatment, for the hardening and preservation of it. A few years' exposure to our corrosive atmosphere has sufficed to completely destroy the face of the stone, and the sharpness of the moulded and enriched work generally. These decayed portions are now being reinstated, and Ransome's solutions applied to the whole surface. Architects, builders, and others, to whom the subject must be of interest, have thus an opportunity of forming their own judgment of the working and effect of the process.

GAS.—The thriving village of Morecambe is now lighted with gas. Messrs. Clapham, Brothers, and Whitley, of Keighley, were the contractors entrusted with the construction of the works, the estimated cost of which was 2,100*l.*——At the Independent Gas-factory at Haggerston, whilst a number of men were at work in different parts of the building an escape of gas took place from one of the great mains in the valve, or regulating shed, and before any attempt could be made to stop the defect in the pipe the gas rushed out in such quantities that it entered the smith's shop, and reaching the furnace, suddenly ignited with a noise resembling the discharge of a piece of ordnance, and the two shops presented a sheet of flame. Several of the hands employed were terribly injured, more especially five of the unfortunate workmen, who being unable to rush out in time, became fairly encircled in flame: eventually the leakage was stopped and the fire extinguished, but not until the valve shop and smith's shed—extending 40 feet in length—were burned out.

STATUES.—The Leeds statue of the late Edward Baines, provided by the subscriptions of his fellow-townsmen, and executed by Mr. Behnes, has been erected in the great hall of the Town-hall. The figure, it is thought, gives the idea of a somewhat taller and thinner man than Mr. Baines, though, on the whole, a pleasing likeness. It is eight feet in height, and made of a block of Carrara marble. It is placed on a temporary pedestal, in one of the spaces between the columns.——The new stone statue of the late Earl of Leicester, placed on the top of Dereham Corn-hall, has been formally inaugurated. It is said to be a very suitable ornament for the new building, as well as an appropriate monument to the greatest farmer in the world. The statue weighs over three tons, and was cut out of a block weighing seven tons. The stone is from the Isle of Portland. The present earl is said to have pronounced the model for the statue to be one of the best which he had ever seen. Mr. Butler, of London, was the sculptor. The statue stands 50 feet above the ground. It is 9 feet in height above the pedestal, which is 2 feet in height, and the plinth 9 inches; and on the pedestal there is a bas-relief representing agricultural implements, such as the plough, the scythe, and the rake.

FENCING QUARRIES: LIABILITY OF ROAD SURVEYORS.—At Stroud County Court it has been decided, in the case of Marment *v.* Barnfield, that it is imperative on a road surveyor to *keep* a quarry that has been dug, on waste land, for road materials, fenced off, so as to prevent injury to man or beast. The quarry in question had been dug ten or twelve years since, and was finally fenced off seven years ago. The surveyor had maintained that his responsibility then ceased, and refused to yield damages for the loss of a blind horse which had fallen into the quarry.

GLASGOW.—Hitherto the chimney-shaft of the St. Rollox chemical works, Glasgow, was regarded as the highest chimney in Scotland, but one now in course of erection at Port-Dundas, Glasgow, will outstrip it by some 10 feet.

EDGBASTON (BIRMINGHAM).—A stained-glass window, in memory of the late Mrs. Ord, mother-in-law of the Vicar of Edgbaston, has just been placed at the east end of the new isle of Edgbaston Parish Church. It is a four-light window, with a single medallion in the two outer lights, and two medallions in each of the centre ones. The two outer medallions represent the baptism of Christ, and the institution of the Lord's Supper; and the four minor medallions the History of Mary of Bethany. The ground work of the outer lights is an ivy-leaf scroll, and of the inner a passion-flower leaf, the tracing being occupied by heraldic bearings. The design of this window was from the pencil of Mr. Sebastian Evans, M.A. The work was executed by Messrs. Chance, of Birmingham. Mr. Charles Ratcliff, churchwarden, Mr. Whateley, and Mr. Messenger, have each undertaken to give a stained-glass window to their parish church; and donations for other windows have been promised.

TENDERS.

For second portion of Whitechapel Workhouse. Mr. Thomas D. Barry, architect. Quantities supplied by Mr. Richard Roberts and Mr. Poland:—

		Deduction for Earthwork if not removed.
E. Maurs	£15,993	£95
George Myers	13,795	150
T. G. Tolley	13,700	60
Charles Fish	13,571	116
George Holme	13,520	—
Thomas Ennor	13,425	116
F. Rummens	13,350	—
Wm. Palmer	13,303	115
Longmore and Burge	13,272	155
Joshua Higgs	13,270	100
George Matthews	13,250	—
J. and J. Wood	13,150	68
Keast and Moon	13,023	96
M'Lennan and Bird	12,927	75
Wm. Higgs	12,888	120
Wm. Downs	12,860	155
Wm. Hill	12,819	75
John A. Scott	12,800	—
Pritchard and Son	12,765	135
S. Hocken	12,676	50
Thomas Rudkin	12,589	97
Hack and Son	12,489	39
W. J. Purkiss	12,297	80
P. Ayers and Co.	11,987	50
Wm. Moxon (accepted)	11,600	39

For the Central Telegraph Station in Threadneedle-street. Mr. Horace Jones, architect. Quantities furnished by Mr. Reddall:—

Holland	£8,438 0 0
Lucas	8,268 0 0
Pritchard and Co.	8,240 0 0
Scott	7,694 0 0
Gammon	7,575 0 0
Ashby and Sons	7,567 0 0
Mansfield	7,083 0 0

For a new Congregational Chapel at Chelsea. Mr. J. Tarring, architect:—

G. Todd, jun.	£5,980 0 0
Piper and Son	5,689 0 0
Patman	5,580 0 0
Dove	5,575 0 0
Higgs	5,300 0 0
T. Rudkin, jun.	4,790 0 0
Myers	4,600 0 0

For building new Premises in Chancery-lane for Mr. Button. Mr. Francis H. Fowler, architect. Quantities supplied by Mr. Morris Evans:—

Notley	3,324 0 0
J. and E. Bird	3,269 0 0
Rider	3,260 0 0
I'Anson	3,184 0 0
Piper and Son	3,125 0 0
Burton (accepted)	3,123 0 0

For House at Oatlands Park, for Mr. J. Wilks. Mr. Laforest, architect:—

Peters, Oatlands	£2,719 0 0
Mills, Egham	2,717 0 0
Goulding	2,675 0 0
Mansfield, London	2,630 0 0
Norris, Hackney	2,397 0 0
Taylor, Sunbury	2,275 0 0

For Warehouse, Maze-pond, Southwark, for Messrs. Harris and Son. Mr. W. H. Skyring, architect. Quantities supplied by Mr. Cambell:—

Colls and Co.	£1,877 0 0
Coleman	1,850 0 0
Rider	1,790 0 0
Pritchard and Co.	1,782 0 0
Fowler	1,768 0 0
Williams	1,700 0 0
Piper	1,654 0 0

For Woodlands Parsonage, Kent. Mr. Josh. Clarke, architect:—

Grover	£1,258 4 0
Bills and Gumbrell	1,235 0 0
Allcorn	1,126 0 0

For Speldhurst Schools, Kent. Mr. Joseph Clarke, architect:—

	Brick.	Stone.
Foster	£1,454 0 0	£97 0 0 extra.
Kirk and Parry	1,176 0 0	1,136 0 0
Sutton, Walters, and Goodwin	1,040 0 0	20 0 0 extra.
Billon	1,020 0 0	
Punnett	997 10 0	997 10 0

For Police Station, at Blaydon. Mr. John Howison, architect:—

Robt. Thompson, West Auckland	£490 0 0
George Gradon, Durham	460 0 0
Thomas Marsh, Blaydon Bank (accepted)	383 0 0

For alterations at Tichborne-court, Holborn, for Mr. Hansard. Mr. G. R. Burnell, architect:—

Wm. Piper	£790 0 0
Nicholson and Sons	684 0 0
Little and Son	673 0 0
J. and W. Sanders	659 0 0
Wagstaff	645 0 0

For sundry alterations and repairs, including a new shop-front, at No. 22, Southampton-row, Russell-square, for Mr. Thomas Kipping:—

Patman	£595 0 0
Traylor and Spriggs	588 0 0
Williams (accepted)	560 0 0

For making roads, footpaths, and surface-drains on the Mount Pleasant Park Estate of the People's Freehold Land Society, at Hither-green, Lewisham:—

Baum, Hackney-wick	£480 0 0
J. Marshall, Willow-walk, Southwark	440 0 0
Houghton and Ley, Walworth-rd.	430 0 0
G. Stevens, Deptford	395 10 0
G. Rodger, Seven Sisters'-road	359 5 0
W. Jones, Tottenham (accepted)	327 10 0

TO CORRESPONDENTS.

Tiles.—"Can one of your readers inform me what is the best solution for dipping new plain roof tiles in, to give them the appearance of old tiles, besides rendering them more impervious to wet;—also, what is the flattest pitch for plain tiles, with safety?—SUB."

W. R. S. (send the list, and it will appear).—W. R.—H. J. N.—W. H.—R. F. (it would not answer the purpose to send a person from London on such a matter).—C. B.—H. K.—T. H. E. (see last number).—A Clerical Subscriber (must look to a manufacturer).—Bond-timber.—Jack.—Dr. B. (we shall be glad to hear from him).—T. R.—J. C.—C. M'K. D.—E. L. P.—M. R. I.—D. F.—E. B.—House Rents.—A Friend of Architecture.—J. D.—H. S. D. (it is not usual, and could not be maintained).—C. W. (we have no more right to prevent the artizan from working "over-time" than he has to prevent us from doing so, which would be exceedingly inconvenient,—to use the mildest term).—W. N.—R. S. (such an office would afford good practice in that particular department, but it has its drawbacks).—D. A.—W. H.—W. D.

The Atlantic Telegraph.—By a slip of the press in last week's number, Mr. *Whitehouse*, the electrician of this telegraph, is called Mr. Whitehead.

"BOOKS AND ADDRESSES."—We are forced to decline pointing out books or finding addresses.

☞ *NOTICE.—All Communications respecting Advertisements and Subscriptions should be addressed to "The Publisher of the Builder," No.* 1, *York-street, Covent-garden. All other Communications should be addressed to the "Editor," and* NOT *to the "Publisher."*

Post-office Orders and Remittances should be made payable to Mr. Morris R. Coleman.

ADVERTISEMENTS.

"THE BUILDER," Vol. I. WANTED. Also Number for JANUARY 5, 1856.—Apply at the Office, 1, York-street, Covent-garden.

WHITECHAPEL UNION. — SECOND PORTION of NEW WORKHOUSE.—The Guardians are desirous of obtaining the SERVICES of a thoroughly efficient and practical PERSON, to SUPERINTEND the ERECTION (under the Architect, Thomas D. Barry, esq.) of the SECOND PORTION of their NEW WORKHOUSE, in Charles-street, Mile-end New Town, in this Union. The salary proposed is 2*l.* 12*s.* 6*d.* per week, and the person appointed will be required to devote the whole of his time to the performance of the duties of the office.—Applications in writing, accompanied by testimonials, are to be sealed up, endorsed "Application for Clerk of Works," and delivered at the Board-room, at this Workhouse, before SIX o'clock in the afternoon, on TUESDAY, 21st SEPTEMBER, 1858, where candidates are personally to attend.—By order, G. ADAMS FARR, Clerk.
Clerk's Office, Workhouse, September 8, 1858.

AN ENGINEER in the North of England has a VACANCY for a PUPIL. The Advertiser has extensive water works, gas works, and other works under his direction, to which the pupil would have constant access. Premium, 150 guineas.—Address ENGINEER, Office of "The Builder."

PUPIL or IMPROVER.—An Architect, practising in London, has a VACANCY for a PUPIL. Premium, 100 guineas; or a Youth, to some extent acquainted with the profession, might be taken as an Improver.—Address, P. Q. R. Office of "The Builder."

WANTED, immediately, by the Swansea Local Board of Health, a CLERK of WORKS, to superintend Sewerage Works. None need apply who have not been previously engaged on similar works, and well acquainted with the use of the level.—Apply, stating terms, to Mr. E. COUSINS, Town Surveyor, Swansea.

WANTED, a BENCH CARPENTER, whose wife would act as Laundress. Wages for the two, 30*s.* a-week, and a cottage. No one with a family need apply. Good references as to the abilities and character of both will be required.—Address, R. H. Post-office, Slough.

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WANTED, a JOINER, for a permanent Situation in a Jobbing Business. Must be steady, and thoroughly understand his business. Wages good.—Apply in person, BRADLEY and EGG, Builders, 3, Charlotte-row, Highbury.

WANTED, a FOREMAN SMITH, at the Lunatic Asylum, Colney Hatch. Wages, 30*s.* a-week. Permanent employment.—Apply to Mr. JOHNS, Clerk of the Works, at the Asylum.

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WANTED, an ENGAGEMENT, by a Gentleman thoroughly acquainted with office business, a good draughtsman, measurer, and accountant, and who is practically acquainted with quantities, estimates, and the superintendence of works.—Address, A. A. Mrs. Hoye, 9, Great Ormond-street, W.C.

WANTED, an ARCHITECTURAL DRAUGHTSMAN, with a knowledge of construction, in an office in the country. Salary, 2*l.* per week, and second-class railway fare one way.—Address, stating past experience, to S. W. G. Office of "The Builder."

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WANTED, by a Young Man, aged 20, who has just completed his articles, an ENGAGEMENT in an ARCHITECT'S OFFICE, where he will have an opportunity of improving himself. He is a good draughtsman, understands levelling, surveying, &c. London preferred. Salary moderate.—Address, M. F. T. Post-office, Bridge-street, Sunderland.

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WANTED, to place a Lad as IN-DOOR APPRENTICE to a respectable master as CARPENTER and BUILDER. Age, 15.—Direct, W. LANGTON, Plumber, Angel-lane, Hayes, Middlesex.

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WANTED, an ENGAGEMENT as CLERK. Has several years been accustomed to take men's time, booking materials, and assisting in the general business of a builder's office.—Address, S. B. 61, Park-crescent, Park-road, Clapham, S.

WANTED, a SITUATION, by a practical CLERK of WORKS, with the highest references as to ability, sobriety, and integrity.—Address, W. T. Post-office, Hinckley, Leicestershire.

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WANTED, by a Youth, a SITUATION in an ARCHITECT'S or BUILDER'S OFFICE. Can design, copy drawings, and make neat tracings, &c. A salary expected.—Address, X. Y. 3, Charles-street, Trevor-square, London.

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CLERKSHIP WANTED, by a respectable Young Man (aged 28 years) in either of the above offices or outdoor Clerk of Works. The advertiser was engaged four years with a builder and surveyor, two years clerk to a London builder, and during seven years (in *interim* times) assisted a father, who was surveyor of a navigation. Good references as to general good character, &c. Address W. W. S. 8, Abbey-terrace, Abbey-road, St. John's-wood.

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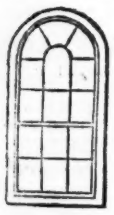

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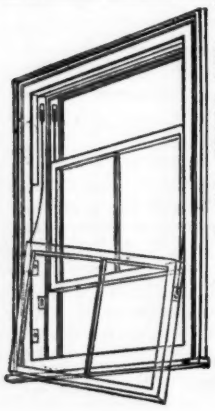

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